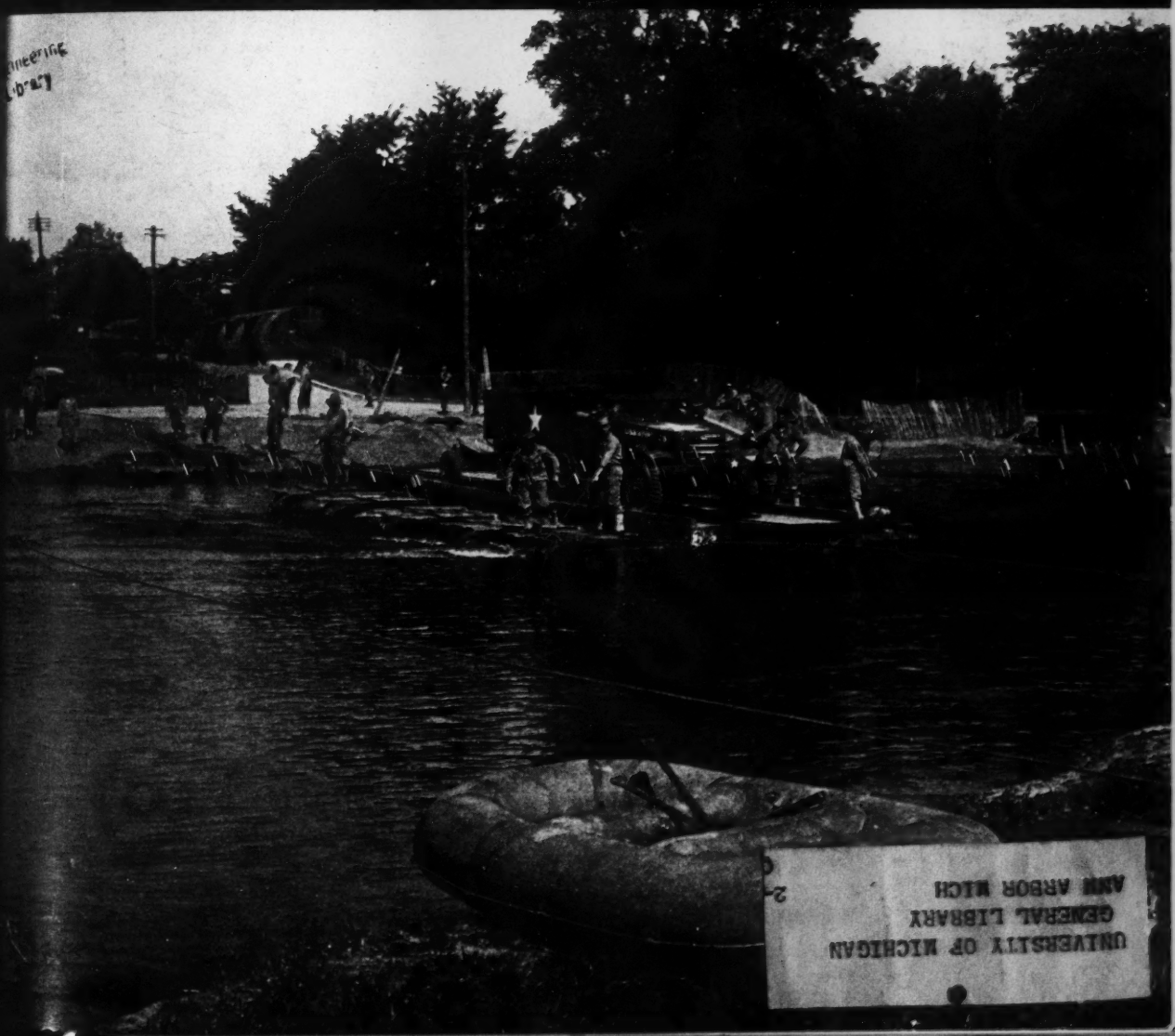
ENGINEERING NEWS-RECORD

U. S. Engineer troops in training throw a ponton ferry across England's River Thames.



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They Married the Motor to the Generator and Set a World's Production Record

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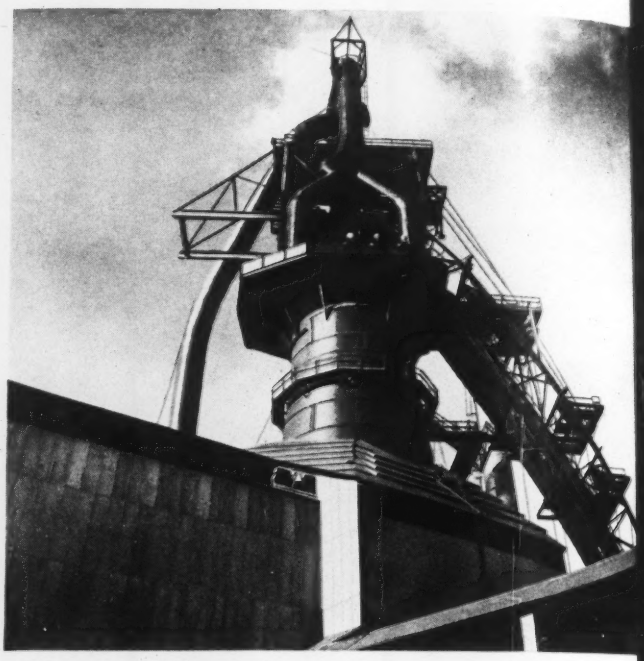
The Story of How a Simplified Skip-Hoist Control Helped Produce 43,478 Tons of Pig Iron in a Month

By C. P. HAMILTON
Industrial Dept.,
General Electric Company



FAST and continuous operation of a modern blast furnace depends on two things. First, the careful co-ordination of a complex operating system. Second, all the parts of this system must perform their functions repeatedly day in and day out over a period of years. In this complex system, the skip hoist plays one of the most important roles.

By simplifying and speeding up skip-hoist operation with amplidyne exciter control, a large midwestern plant, in March of this year, established a new pig-iron production record of 43,478 tons in one month, and set a new daily high of 1,608 tons.

The skip hoist in this plant hauls the measured load of iron ore, lime stone, and coke from the loading mechanisms in the stock house up a 200-foot incline to the furnace top. These skip buckets make 900 to 1100 trips daily up this incline. Each bucket must make this trip without fail as its turn comes around in the time sequence of the loading program.

Since so much depends on continuity of operation, the skip-hoist drives, for many of the modern blast furnaces, use a highly developed, adjustable-voltage, d-c system with two hoist motors and two generators.

For this plant, General Electric engineers arranged these motors and generators into a two-unit system, so designed that either unit can operate the hoist. They further designed the system so that either hoist motor, by simple switching, may be connected to either generator. Control of the hoist speed, rate of acceleration and retardation, and the division of the load between the units were further simplified and made more accurately responsive by using an amplidyne exciter for each generator.

C. P. HAMILTON

This amplidyne exciter is a small, direct-current generator with a special design of armature-and-field combination. This machine has a high amplification factor between control input and power output and a quick response to the controlling sources. A comparable generator of conventional design requires approximately 2½ seconds to reach 90 per cent of its full voltage, while the amplidyne exciter requires but 1/20 of a second to do this. Besides being 50 times faster in its response to the excitation source than the conventional generator, the same-size amplidyne exciter requires only 1/100 of the excitation watts.

The accuracy, quick response, and versatility of the amplidyne exciter has made it a valuable tool for simplifying and speeding up operations such as hoisting, which otherwise would require a complicated control system. General Electric engineers introduced this exciter into the steel industry in 1939. Since then they have put it to other uses, including the blast-furnace skip hoist.

This is another example of assistance rendered by General Electric engineers to promote electrical and mechanical progress in the construction industry. If you have a problem, their skill, plus G-E equipment, might well bring about the best solution. Just get in touch with our nearest office. We'll be glad to help you. General Electric, Schenectady, N. Y.

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The Week In Engineering and Construction

GINEERING NEWS-RECORD • AUGUST 19, 1943 • VOLUME 131 • NUMBER 8

Working stresses for lumber increased by 20 percent

Blanket directive, effective not later than Nov. 1, does not include housing grades. New design manual will be ready for distribution Oct. 1.

e War Production Board on Aug. 9 d a directive increasing stress rat- 20 percent for all structural grades umber that have been graded for gth by a recognized lumber grading cy. The increase applies to all struc- grades of all commercial woods and l properties except modulus of elas- , a physical constant that does not ge. The order as signed includes buildings and is effective on Nov. 1, ing to all government-constructed, ced or approved structures. How- the changes may be made at once contracts to be let should be exam- for changes, mandatory unless they result in serious delay to the war t.

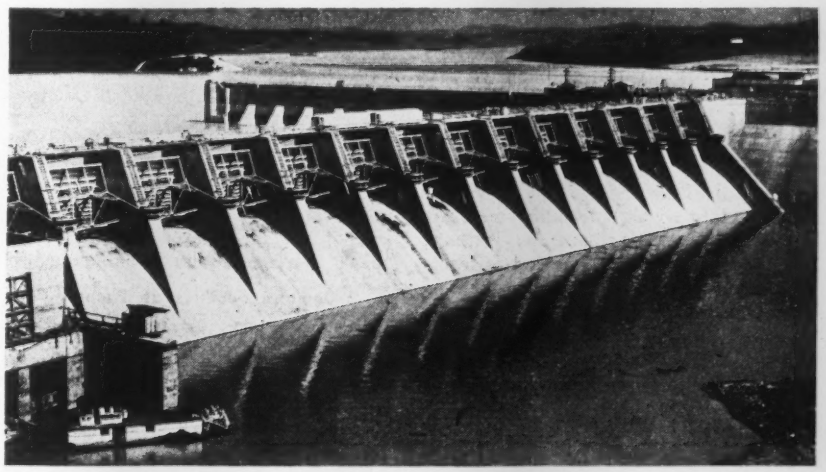
se of the higher stress values in tural timbers is estimated to save 00.000 ft. b.m. and possibly 2,000 of bolts, connectors and other fas- gs annually.

hese specifications do not cover dwell- houses and light framing in which ension lumber rather than structural sed almost exclusively. Neither do prevent the use of higher stresses in tary construction where such stresses specified by the military authorities. s in the cases of stress revisions in (*ENR* Sept. 17, 1942, p. 389) and rete (*ENR* Oct. 8, 1942, p. 463), ctive No. 29 on lumber is limited to dings in which stress grades of lum- are used, because during the emer- y such buildings are largely financed ctly or indirectly by the government. Working stresses used heretofore with tural grades of lumber were con- rative, the WPB states, noting that were established a number of years for use under peacetime conditions. siderable research has been done e, resulting in improved grading tech- ue and design. This research work the improvements were carefully lyzed by the Conservation Division of War Production Board in cooperation h the U. S. Forest Products Laboratory and the National Lumber Manufacturers Association, and the results of that work embodied in these emergency specifications. The analysis indicated that the increase in stresses could be safely made without the hazard of failure and that they would prove satisfactory provided the precautionary requirements contained in the specifications are observed.

These specifications combine in a single document information now scattered in a number of publications and some data resulting from recent tests not yet published. This document, really a design manual, covers not only working stresses for structural grades of lumber and design loads and formulae, but timber connector, bolt, lag screw, nail, spike, drift pin and wood screw joints. In addition there is a chapter on glued laminated structural lumber containing general provisions aimed at assuring satisfactory fabrication and construction in that comparatively new lumber construction field.

Specifications and design data were prepared under the general direction of Howard Coonley, director, Conservation Division, and C. L. Warwick, chief, Materials Branch, Conservation Division. Their development has been the special assignment of R. P. A. Johnson, wood consultant, and C. A. Willson, chief, Construction Materials Section. L. J. Markwardt, chief, Timber Mechanics Section, and other staff members of the U. S. Forest Products Laboratory, Madison, Wis., were consulted and concurred on decisions. Experience and practices of various Government departments were made available and the Technical Advisory Committee of the National Lumber Manufacturers Association and affiliated associations in the lumber industry assisted with the cooperation of Frank J. Hanrahan and Richard G. Kimbell.

Copies of the specifications should be available about Oct. 1 at the Distribution Planning Unit, War Production Board, Room 1090, Railroad Retirement Building, Washington (25), D. C.



Reservoir begins to form behind Fort Loudoun Dam

On Aug. 2, Fort Loudoun Dam was closed. The level of the lake reached the crest of the spillway (El. 783) five days after closure. The water was allowed to flow over the spillway for about two weeks while a small amount of concrete was poured in the powerhouse section. It is anticipated that the reservoir will be filled to normal operating level, el. 813, early in September. When filled, the reservoir will extend the 9-ft. navigation channel from the dam to Knoxville, Tenn., 45.4 miles upstream. Power for war industries will be produced.

Construction employment declines in most large industrial centers

War Manpower Commission survey of representative cities indicates serious unemployment ahead. Work of meeting the continuing scarcity of housing is the one bright spot

Results of a nationwide survey by field workers of the War Manpower Commission indicates that many construction workers will have to shift to other industries in which hourly rates of pay are lower than in construction. There is a continuing need for housing to accommodate in-migrant workers in some busy centers but the general prospect for long continuing employment from that source is not good.

A study of the labor situation in six widely-separated construction areas as reported by WMC analysts, indicates that new construction will not absorb impending layoffs. The areas studied, which represent a wide variety of construction activity, include New York City as a non-boom construction region; Detroit for general industry; Tulsa, aircraft; Seattle-Bremerton and Tacoma for shipbuilding; and Washington as a general construction-boom town.

No scarcity at New York

In New York City which, because it lacked a war construction boom, is an area of labor surplus, and which in 1940 employed 132,000 construction workers, had an estimated 1,000 such workers available the first of this month, with 6,000 more expected to be unemployed by November, and 12,000 by next May.

Construction there has declined about 40 percent since March, 1940, and it is estimated that it will drop about 15 percent more before next March.

Construction activities in New York now are mostly essential repair and maintenance work requiring painters, and mechanical trades. The only jobs open for heavy construction men are those of laborers, helpers and learners, in shipyards or other war industries at wage rates well below those in the construction trades.

Critical shortage at Detroit

In contrast to New York City, Detroit, where war-equipment manufacture has necessitated a vast building program, has so critical a labor shortage that rationing of male labor has become necessary. The common labor shortage is most critical of all, and particularly in the construction trade. In addition to labor furnished through the unions, the local employment office recently reported orders for 300 common laborers which it found difficulty in filling because workers preferred well-paid inside work to outside labor. No letup in construction activities is indicated before late fall. It is estimated that housing for 10,000 families still is needed in addition to that now under construction.

At Tulsa, lack of materials is noted in particular as affecting employment. Except for the building or conversion of dwellings, there is no important construction activity at present, and none is proposed.

Housing on the West Coast

In the shipbuilding areas on the West Coast, the greatest present need for construction labor is on housing. Though a field report from the Seattle-Bremerton area says the short duration of construction projects makes it impossible to predict future employment trends, it adds that most heavy-construction workers are expected to be laid off by September. Much of the slack, however, is expected to be taken up by housing construction.

Over 12,000 family units are programmed for construction during the rest of this year, with 5,000 privately constructed units to be completed during the same period. It is estimated that over 2,000 more family units can be added through the National Housing Agency's conversion program, and another 400 by private means. Completion of dormitory facilities will care for about 3,000 persons. The total planned housing program would care for 22,000 workers not now in the area, which is about 10,000 short of the in-migrants expected.

Demand declines at Tacoma

At Tacoma, construction began to taper off about March, and it is expected the majority of large jobs will be completed this fall, leaving the construction of housing as the main building activity.

Few construction workers, however, are expected to go to nearby projects because of lower wage rates. It is anticipated that an additional 3,500 w ers can be housed in new structures June, 1944. Announcement was m recently of authorization to constr 800 dwelling units with private capi At about the same time, 1,500 appli tions for housing were on file with Tacoma Housing Authority.

Washington needs houses

Housing continues to be a ver problem in the nation's capitol, a despite a surplus of some classes skilled construction labor. It is estima —by the carpenters' union—that t 2,000 to 3,000 union carpenters in W ington are unemployed, while the ployment office says jobs are waiting 100 non-union ones.

Construction wages in the Washing area start at 87½ cents per hour for skilled labor on union jobs. Many skilled and semi-skilled construct workers have made as much as $100 week. There is no other compara wage scale in the area.

The total program of war housing the Washington area, which embra parts of Maryland and Virginia and of the district, included 33,172 publi financed units and 32,173 privately c structed family units plus nearly a th sand more single units made availa by conversion. But if the more t 40,000 anticipated deficiency of work are to be attracted to Washington, competition with industrial areas wages, adequate housing for them have to be provided.

• • •

A 14-foot fill required for St. Louis airport

Charles H. Ellaby, President of St. Louis, Mo., Board of Public Serv has stated that Col. Lawrence B. Fea U. S. District Engineer, recently indica that the War Department would not pose the construction of a 14-ft. fill connection with the proposed new nicipal airport at the Columbia Bott site, near the junction of the Miss and Mississippi rivers, should that be selected. The proposed site is quently flooded when the river reac higher stages.

Ellaby has stated that should the p posed new government dam be c structed near Chain-of-Rocks, the Col bia Bottoms site would not be floo by the pool expected to be formed ab the dam. He said that the proposed would place the level of the site hey any anticipated rise in the rivers.

ENGINEERING NEWS-RECORD. Published every Thursday. **Return postage guaranteed.** Vol. 131, No. 8. Price 25c per copy. Allow at least ten days for change address. All communications about subscriptions should be addressed to the Director of Circulation, 99-129 N. Broadway, Albany, N. Y., or 330 West 42nd Street, New Yo N. Y. Subscriptions, United States, U. S. Possessions and Latin American Republics, $5.00 for one year, $8.00 for two years, $10.00 for three years. Canada, $5.50 for year, $9.00 for two years, $11.00 for three years. Great Britain and British possessions 54 shillings for one year, 108 shillings for three years. All other countries, $9.00 one year, $18.00 for three years. Entered as second-class matter October 29, 1936, at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Printed in U.S.A. Cable Address: "McGrawhill New York." Member A.P.B. Member A.B.C. Copyright 1943 by McGraw-Hill Publishing Company, Inc. James H. McGraw, Fou and Honorary Chairman; James H. McGraw, Jr., President; Howard Ehrlich, Executive Vice-President; Mason Britton, Vice-President; Curtis W. McGraw, Treasurer; Jos A. Gerardi, Secretary; J. E. Blackburn, Jr., Circulation Manager. **Publication office: 99-129 North Broadway, Albany, N. Y. Editorial and Executive Offices: 330 West 42nd S New York.** District Managers and Branch Offices: Fred G. Hudson, 520 N. Michigan Ave., Chicago; J. W. Otterson, 68 Post St., San Francisco; Aldwych House, Aldw London, W. C. 2, England; Washington; J. M. Spackman, New York; A. B. Cozzens, Philadephia; E. E. Duff, Jr., Cleveland; B. F. Horn, Detroit; Richard Y. Fu St. Louis; R. N. Phelan, Los Angeles; J. I. Ballard, Boston; Ralph Maultsby, Atlanta, Ga.

State housing authority set up by Connecticut to assist rehabilitation

With a ten-point program, it will study the housing situation in all communities in an effort to coordinate the work of local agencies

Connecticut a State Housing Au-ity to function now as well as after war has been established to encour- rehabilitation of run-down areas of state by private enterprises. The ram planned for the authority has following ten points:

Get acquainted with organizations in low cost housing field and find out is being done.

Study the housing situation in all s with a view to coordinating with work of local agencies.

Study building codes in and out of state and prepare a suggested uniform ding code for Connecticut cities, h would contain up-to-date provisions best construction practices for various s of residences and buildings.

4. Study ways and means of encouraging private enterprise to take a larger share in rehabilitation of the rundown areas, including legislation in other states with an eye to suggesting constructive legislation for Connecticut.

5. Study rural housing needs in the state and ways of meeting them.

6. Collect information as to new and less expensive construction methods, and make this available to contractors, builders, financial and real estate interests in Connecticut.

7. Arouse interest in slum clearance and low cost housing by newspaper and radio publicity, etc.

8. Work for the removal of temporary war housing.

9. Cooperate with towns in the state, where requested, and with the federal authorities, in the construction and management of federally-financed war housing.

10. Cooperate with town and city planning commissions and with other organizations that are now or may hereafter be interested in postwar housing.

Prentice White, of West Hartford, formerly president and treasurer of White & Clark, Inc., Hartford, construction contractors, has been named administrator of the new State Housing Authority.

Crushed stone vs. gravel in New York tests

The National Sand and Gravel Association, National Crushed Stone Association, Inc., York City's Department of Public Works the testing laboratory of the Borough sident of Queens cooperated in tests to compressive strengths of comparable con- mixes made with stone or gravel.

t present stone is used for virtually all crete paving in New York City and gravel most of the building work. Both producers attempting to extend their sales, hence the . The stone interests were represented in tests by A. T. Goldbeck, engineering direc- and J. E. Gray, testing engineer. Stanton ker, director of engineering for the Na- al Sand Gravel Association participated.

est cylinders were made in three similar series of 4, 5, 6, and 7 bag batches for sand and for stone using the same sand and a slump of 4 in. Water content was varied to get the desired slump to check a claim of the stone interests that concrete made with a stone aggregate is stronger than one made with gravel using the same amount of water. Four standard cylinders were made from each batch of concrete 2 to be broken at 7 days and 2 at 28 days. Data on the tests is promised ENR for publication.

Tests were coordinated and observed by Wm. S. Elliott, chief of the materials section of the Dept. of Public Works of New York and laboratory facilities were made available by Maurice A. Fitzgerald, Commissioner of Borough Works of Queens.

• • •

Concrete oil barge work to be reduced one-half

The U. S. Martime Commission has reduced from 65 to 33 the number of non-self-propelled concrete oil barges to be built.

Reduction in the construction program was brought about with cancellation of contracts with the MacEvoy Shipbuilding Corp., Savannah, Ga., for all but seven of the 23 barges that company was to build (*ENR*, June 17, p. 878), and by reducing from 20 to four the number to be built by McCloskey and Co. at its San Jacinto plant at Houston, Tex. Neither company has as yet delivered any of the barges contracted for.

The commission's contract continues in force with the Concrete Ship Constructors, National City, Calif., for completion of that company's full quota of 22 barges. Seven of these have been delivered and three more launched.

Reasons given by the commission for reducing the number of oil barges to be built are: Increased costs over original estimates; serious delays in construction, which the commission says, however, were unavoidable on the part of the contractors; material difficulties; and engineering difficulties encountered when it was found that it was impossible to use the same standards that would be used in building a concrete structure for use on land. The difference in price between original estimates and actual construction will not be known until the contracts are liquidated.

Added to these reasons for terminating the contracts are the additional ones that steel, which was not available for a sufficient tank building program at the time the barge contracts were entered into two years ago, has now become available and contracts have been let, or are soon to be let, for an additional 511 tankers. Assuming that these will continue to be of greater use than the concrete barges, even after the war, the commission deemed it expedient to change over to the construction of tankers instead of continuing its concrete barge program which it still looks upon as an experiment.

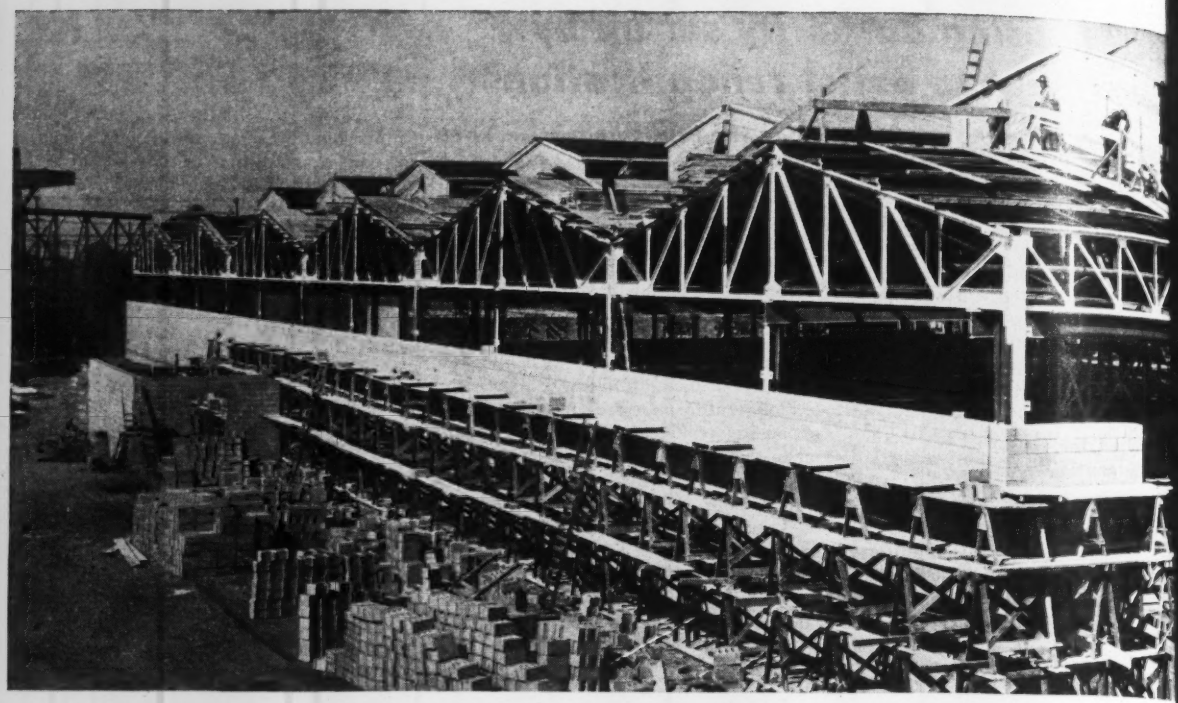


Fig. 1. End view of factory showing six 50-ft. wide transverse bays and construction of concrete-block curtain walls.

Good Organization and Local Materials Help Speed Construction

Because of the careful planning of the construction procedure and use of local materials for the exterior walls, a Midwest war plant was completed ahead of an extremely fast construction schedule. Furthermore, by use of local materials, priority troubles were reduced to a minimum and low cost resulted. The project also is of interest in that bolted field joints were used on erection of the framework, which had to be steel because of the manufacturing process to be housed. This type of connections will permit the framework to be salvaged with little trouble after the war ends, if desired.

The building was to provide six 50-ft. transverse bays with a monitor roof in each bay and the structure is 868 ft. long. To save steel and permit early construction free of priority troubles, the foundations were constructed of un reinforced concrete insofar as practi cable. Because of the heavy manufa turing processes to be housed an 8-i concrete floor reinforced with one lay of 4x4-in. No. 4 wire mesh was used. Th floor was constructed in 25x40-ft. bloc with concrete delivered by agitator truc from a central mixing plant.

Longitudinal spacing of the column which are 10-in., 49 lb., H-sections, i 20 ft. For the roof shop-riveted tran verse trusses are used; framing betwee these trusses are longitudinal all-rivete trusses in the line of the columns. Dia onal bracing consists of steel rods an angle sections. Expansion joints ar provided on 180-ft. centers longitudinall At the joints, double steel columns an trusses are used, which in reality divide the building into five separate units placed end to end.

In each of the longitudinal bays thre lines of 18-in., 54.7-lb. steel I-beams ar provided for crane supports. Clea height between the floor and transverse crane beams, is about 18 ft. The steel erection procedure, permitting rapid con struction, is shown by Fig. 4.

Because they could be manufactured

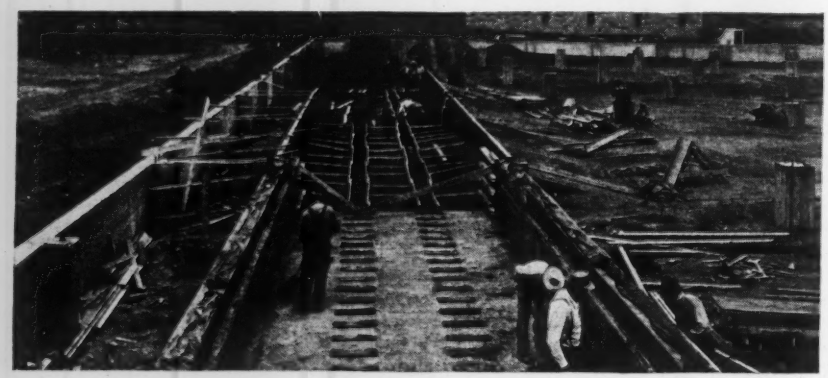


Fig. 2. Along each end of the building a sunken railroad is provided. Floor slab is 14-in. thick and reinforced with steel bars. The 8-in. thick ties are 2-ft. long and on 2-ft. centers.

delivered immediately by local com-ies without trouble from priorities, exterior walls were built of concrete k construction.

Certain walls inclose steel frame

hickness of the walls is 12 in. They tied to the exterior columns at three ls by bolts and anchor plates; the es have slotted holes to permit the to expand and contract, yet provide necessary rigidity in the transverse ction.

or further rigidity, three horizontal, forced-concrete bands or girts were rporated in the wall. One girt is below the window, one above the and one at the roof line. The erous local manufacturing plants ered large supplies of concrete block short time and a large supply of ed labor familiar with this product available. Thus the walls were t in a hurry. Also, transportation and l costs were low. Windows in the erior walls are wood frame, but those the monitors are movable steel sash. oof construction consists of 9-in. steel nnel purlins, covered with 2x8-in. gue and groove wood decking, two- felt, ½-in. insulation board, and a four-ply built-up roofing.

Service utilities

luorescent lighting is used throughout manufacturing building. Power for se units is supplied by small trans-mers located between columns and ft. above the floor. The current is pped down in voltage from 4,160 to v. Power for the plant equipment is ivered by seven 600-kva. sub-stations ated at floor level in various parts of factory. The supply is reduced from 0 to 480 v. For some machinery er distribution is through underfloor ts, while at other equipment power brought down the columns from the bars. Heat for the plant is purchased n a public utility. Blower units have n installed in the roof trusses, and unit is installed for each 6,500 sq.ft. floor space.

Locker rooms and toilets are located a separate building just outside and allel to the main structure. This lding also has concrete block walls, crete floors, and the roof is finished n a wood frame.

Those in charge of construction

The plant was built by the Louisville trict, Corps of Engineers. During time construction was in progress Henry Hutchings, Jr., was district ineer, Maj. Andrew L. Fabens, area ineer, and C. L. Cowan, resident en-eer. The architect-engineer manager a combination of Leslie Colvin, Wil-n E. Mohler, and Russen & Harrison. rk started May 16, and the construc-was completed late in 1942.

Fig. 3. As soon as the plain concrete foundations were in place, construction of the 8-in. floor slab, which is reinforced with a single layer of 4x4-in. No. 4 wire mesh, was started.

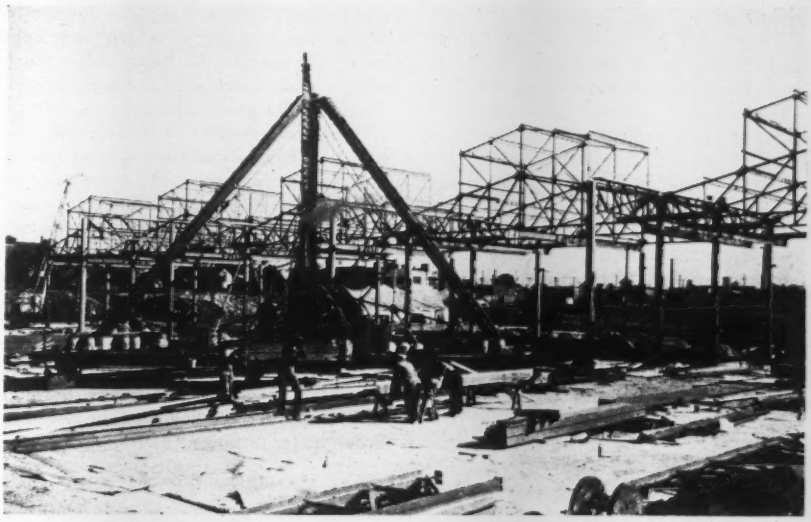


Fig. 4. Steel erection was by one crawler crane and one stiffleg derrick starting at one end of the building and each erecting the steel for three bays. Some transverse trusses were erected with the monitor trusses attached, but for others this framing was added later.

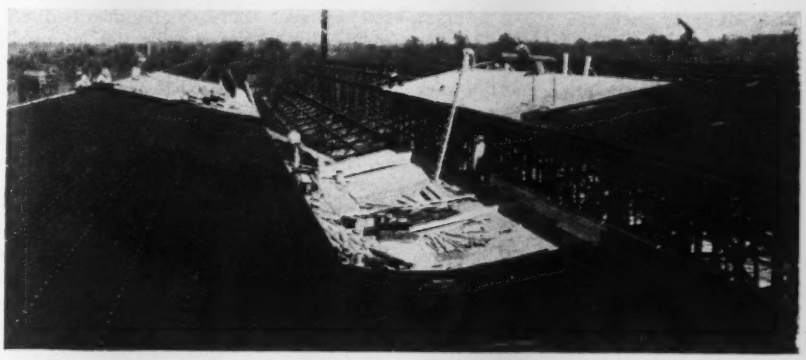
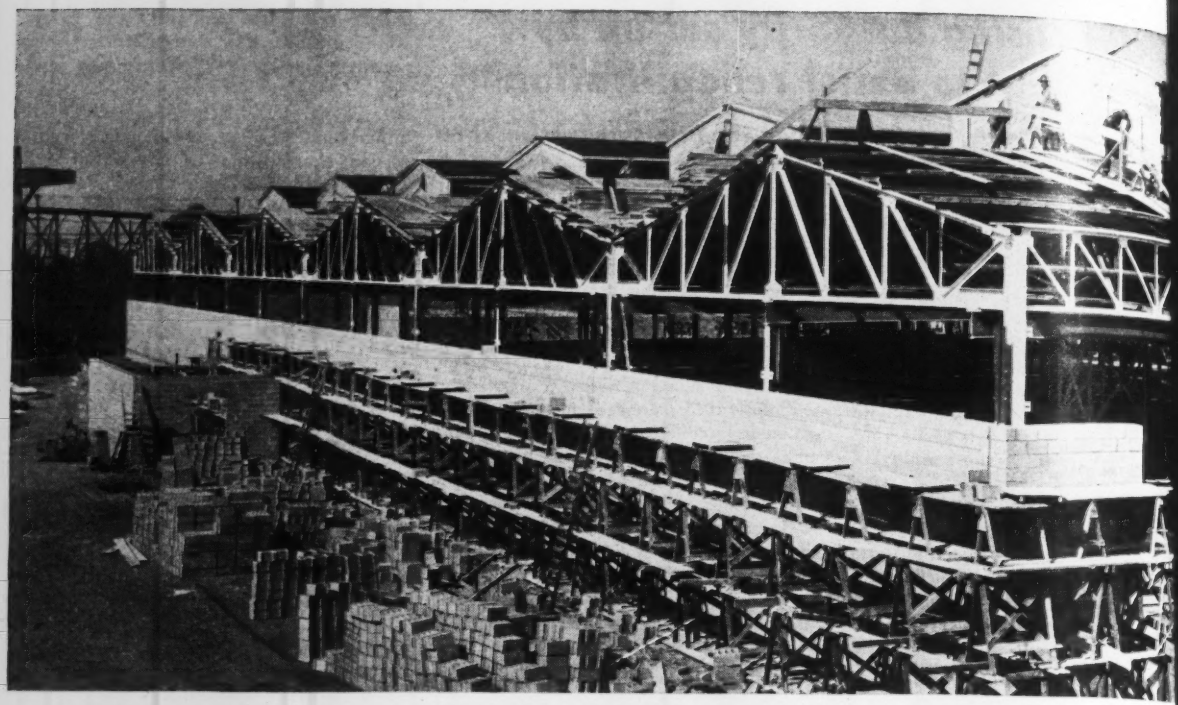


Fig. 5. Roof construction consisted of a 2x8-in. wood planking, two-ply felt, ½-in. insulation board, and a four-ply built-up roofing. The wood decking and the two-ply felt were being added when this picture was taken.



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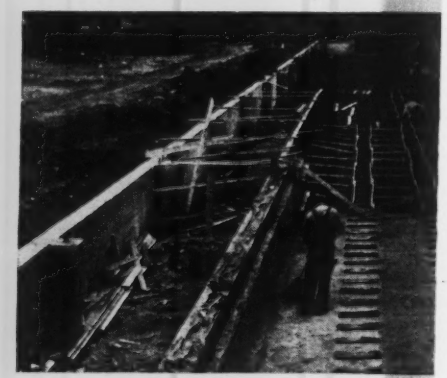

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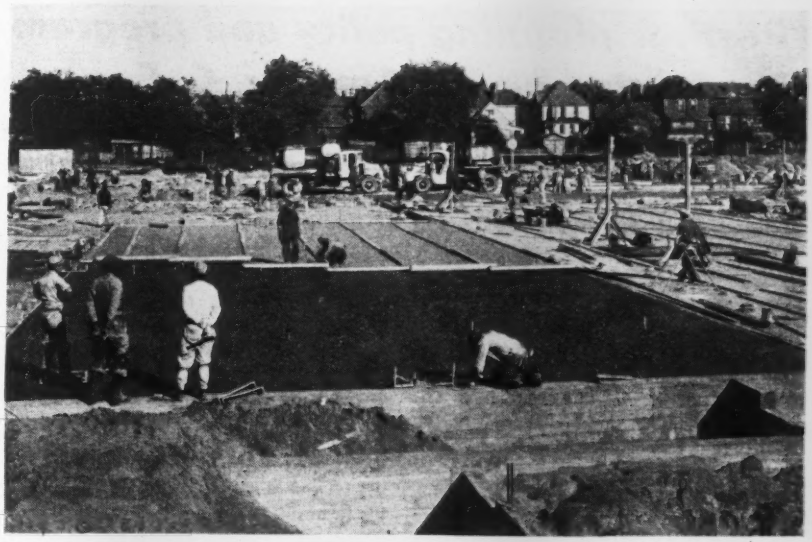

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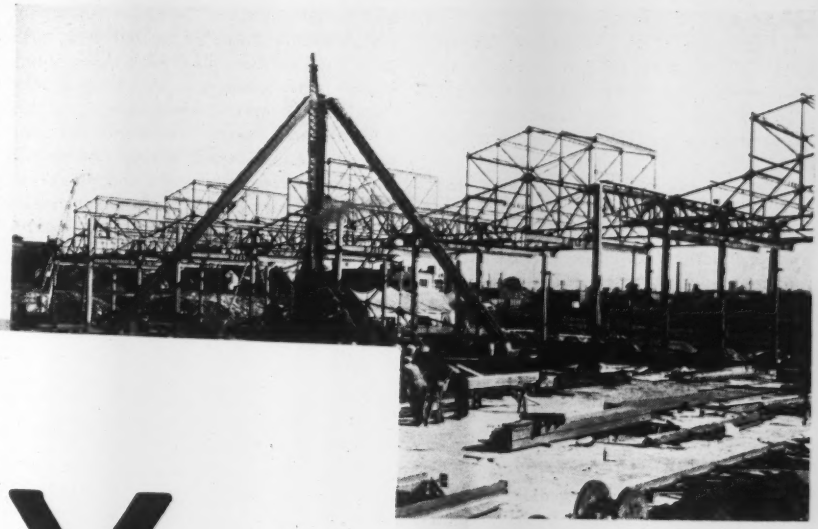

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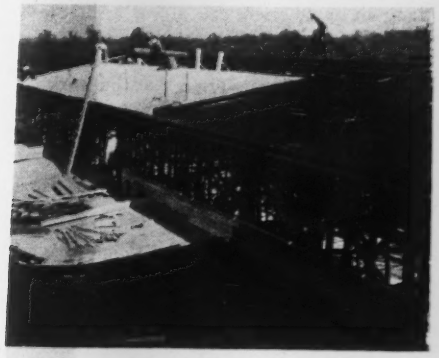

a 2x8-in. wood planking, two-ply felt, ½-in. roofing. The wood decking and the two-ply was taken.

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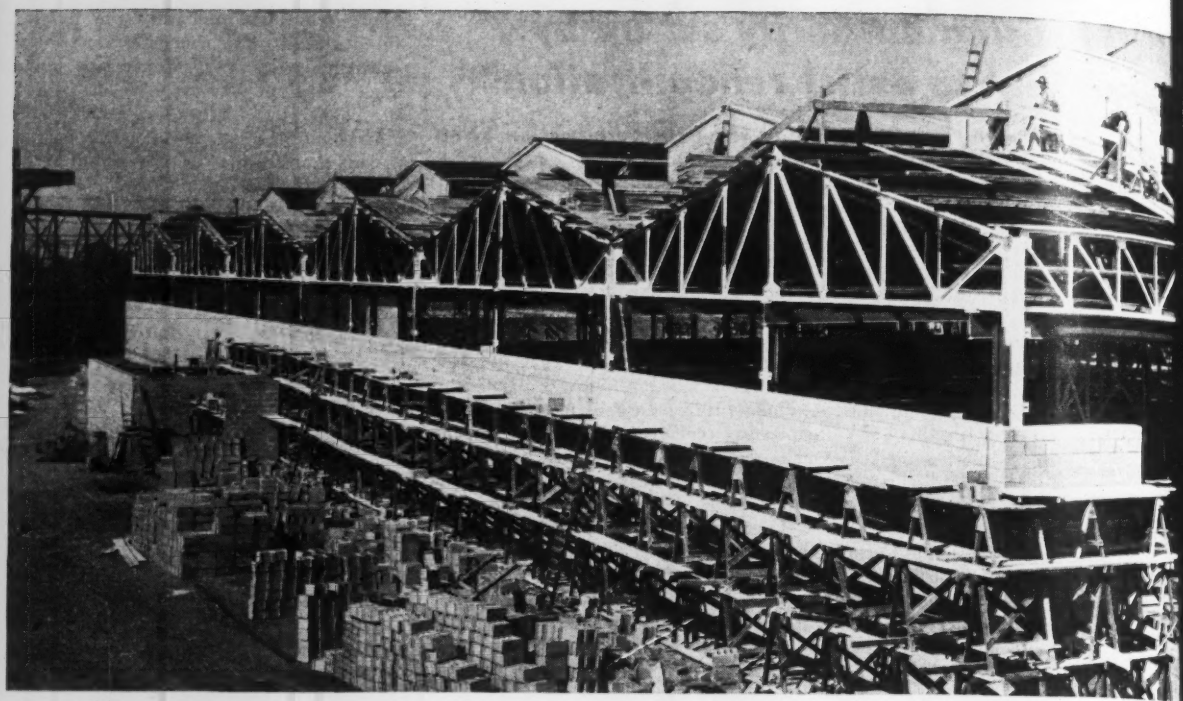


Fig. 1. End view of factory showing six 50-ft. wide transverse bays and construction of concrete-block curtain walls.

Good Organization and Local Materials Help Speed Construction

Because of the careful planning of the construction procedure and use of local materials for the exterior walls, a Midwest war plant was completed ahead of an extremely fast construction schedule. Furthermore, by use of local materials, priority troubles were reduced to a minimum and low cost resulted. The project also is of interest in that bolted field joints were used on erection of the framework, which had to be steel because of the manufacturing process to be housed. This type of connections will permit the framework to be salvaged with little trouble after the war ends, if desired.

The building was to provide six 50-ft. transverse bays with a monitor roof in each bay and the structure is 868 ft. long. To save steel and permit early construction free of priority troubles, the foundations were constructed of un reinforced concrete insofar as practicable. Because of the heavy manufacturing processes to be housed an 8-in concrete floor reinforced with one layer of 4x4-in. No. 4 wire mesh was used. The floor was constructed in 25x40-ft. blocks with concrete delivered by agitator trucks from a central mixing plant.

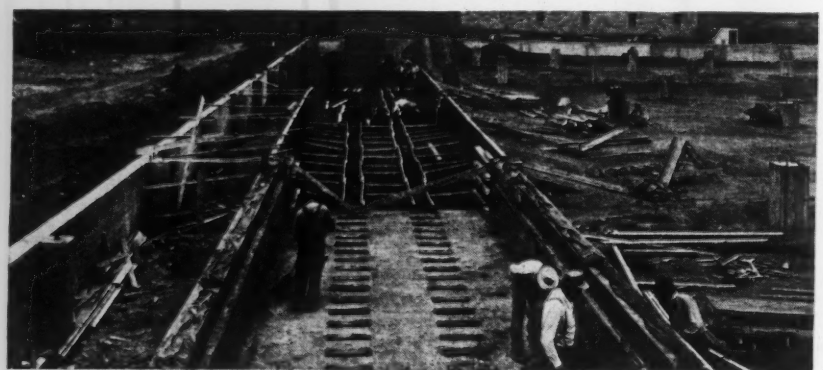


Fig. 2. Along each end of the building a sunken railroad is provided. Floor slab is 14-in. thick and reinforced with steel bars. The 8-in. thick ties are 2-ft. long and on 2-ft. centers.

Longitudinal spacing of the columns which are 10-in., 49 lb., H-sections, is 20 ft. For the roof shop-riveted transverse trusses are used; framing between these trusses are longitudinal all-riveted trusses in the line of the columns. Diagonal bracing consists of steel rods and angle sections. Expansion joints are provided on 180-ft. centers longitudinally. At the joints, double steel columns and trusses are used, which in reality divide the building into five separate units placed end to end.

In each of the longitudinal bays three lines of 18-in., 54.7-lb. steel I-beams are provided for crane supports. Clear height between the floor and transverse crane beams, is about 18 ft. The steel erection procedure, permitting rapid construction, is shown by Fig. 4.

Because they could be manufactured

delivered immediately by local com-ies without trouble from priorities, exterior walls were built of concrete ck construction.

Curtain walls inclose steel frame

Thickness of the walls is 12 in. They tied to the exterior columns at three els by bolts and anchor plates; the es have slotted holes to permit the l to expand and contract, yet provide necessary rigidity in the transverse ction.

For further rigidity, three horizontal, forced-concrete bands or girts were rporated in the wall. One girt is below the window, one above the , and one at the roof line. The erous local manufacturing plants vered large supplies of concrete block a short time and a large supply of lled labor familiar with this product available. Thus the walls were ilt in a hurry. Also, transportation and l costs were low. Windows in the erior walls are wood frame, but those the monitors are movable steel sash. Roof construction consists of 9-in. steel nnel purlins, covered with 2x8-in. gue and groove wood decking, two- felt, ½-in. insulation board, and t a four-ply built-up roofing.

Service utilities

Fluorescent lighting is used throughout manufacturing building. Power for se units is supplied by small trans-rmers located between columns and ft. above the floor. The current is pped down in voltage from 4,160 to 0 v. Power for the plant equipment is livered by seven 600-kva. sub-stations cated at floor level in various parts of factory. The supply is reduced from 60 to 480 v. For some machinery wer distribution is through underfloor cts, while at other equipment power brought down the columns from the bars. Heat for the plant is purchased m a public utility. Blower units have en installed in the roof trusses, and unit is installed for each 6,500 sq.ft. floor space.

Locker rooms and toilets are located a separate building just outside and rallel to the main structure. This ilding also has concrete block walls, ncrete floors, and the roof is finished h a wood frame.

Those in charge of construction

The plant was built by the Louisville strict, Corps of Engineers. During time construction was in progress l. Henry Hutchings, Jr., was district gineer, Maj. Andrew L. Fabens, area gineer, and C. L. Cowan, resident en-eer. The architect-engineer manager s a combination of Leslie Colvin, Wil-m E. Mohler, and Russen & Harrison. rk started May 16, and the construc-n was completed late in 1942.

Fig. 3. As soon as the plain concrete foundations were in place, construction of the 8-in. floor slab, which is reinforced with a single layer of 4x4-in. No. 4 wire mesh, was started.

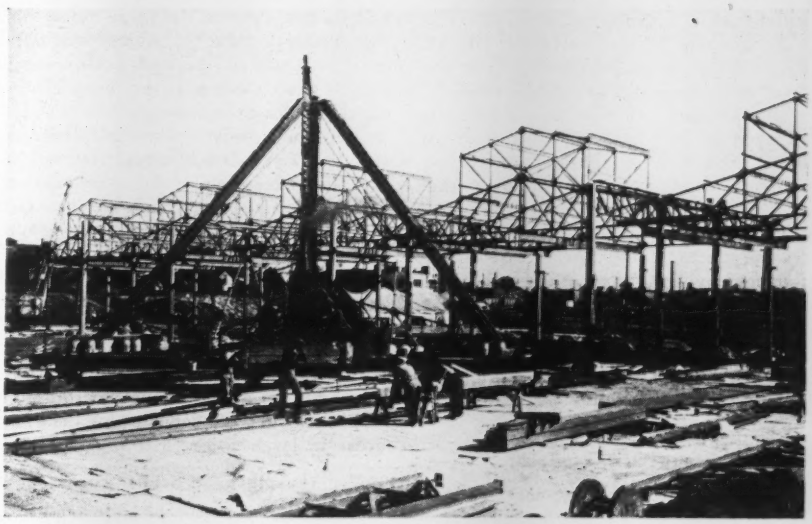


Fig. 4. Steel erection was by one crawler crane and one stiffleg derrick starting at one end of the building and each erecting the steel for three bays. Some transverse trusses were erected with the monitor trusses attached, but for others this framing was added later.

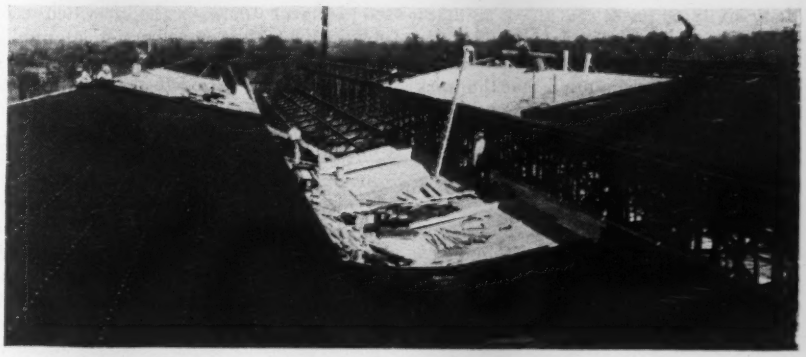


Fig. 5. Roof construction consisted of a 2x8-in. wood planking, two-ply felt, ½-in. insulation board, and a four-ply built-up roofing. The wood decking and the two-ply felt were being added when this picture was taken.

Postwar planning policy and program formulated by the Am. Soc. C. E.

Board of direction of the American Society of Civil Engineers adopts a program for stimulating the advance preparation of drawings, specifications and financing plans for public and private construction immediately following cessation of hostilities

A policy to be applied to planning for postwar construction was approved by the board of direction of the American Society of Civil Engineers at its meeting held in Los Angeles July 29 (*ENR*, August 5, p. 225). The statement approved by the board had been prepared by the society's Committee on Postwar Construction, which committee was authorized at the spring meeting of the board upon recommendation of the Construction Division of the society and was appointed in June. The committee consists of G. Donald Kennedy, chairman, Adolph J. Ackerman, Dean G. Edwards, Frederick H. Fowler, Gustav J. Requardt, and Frank T. Sheets.

A summary of the statement follows. Its full text is to be published in the September issue of *Civil Engineering*.

Despite the fact that this country is engaged in a total war, a program of both private and public construction projects of unquestioned usefulness that can be undertaken after the release of manpower from the armed services and war production activities is essential if that manpower is to be quickly absorbed in peacetime pursuits. To this end the American Society of Civil Engineers offers to the country its facilities and accumulated knowledge in working out the practical procedures that are necessary.

Many men available

Due to the approaching completion of the great war construction program, many experienced engineers and architects whose services could be usefully employed in the preparation of detail plans and specifications for postwar construction projects are becoming available. Many of these men are above military age or incapable of combat duty.

Plans for postwar construction should be based on the assumption that the work will be done under the contract system employing the training and experience of the many competent contracting organizations of the country.

Industrial construction

Under the leadership of the Committee for Economic Development, industry is developing tangible plans for prompt conversion from war production to the making and marketing of peacetime products. Part of the task of meeting the pent-up demand for durable and consumer goods will be the alteration or construction of plant facilities, which work will be speeded by advance preparation of detail plans and specifications. Some of the structures built as part of the great expansion of plant facilities made necessary by war production needs may be suitable for conversion to peacetime production; others will have to be dismantled. Many older facilities already are obsolete and will have to be modernized or replaced.

Much housing work anticipated

An acute demand for new private housing is expected to manifest itself as soon as wartime limitations are lifted. This will be true despite the large volume of war housing, much of which was built on a bare subsistence basis. Also, much of this war housing is not properly located for peacetime use.

While new designs, materials and construction methods will attract interest in the postwar period, wide acceptance of radical changes from customary styles of architecture and methods of construction are not anticipated.

An early start on housing can be stimulated through stimulation of the advance purchase of sites for individual homes or housing projects.

Active interest in multiple unit housing is anticipated, both as new developments and as replacements for decadent areas in large cities.

The place of public works

Based on past records, industrial construction and private housing should account for approximately two-thirds of all construction activities in the postwar period, the remaining third being public works. There is a limit to the volume of employment that can be provided economically on the construction of public works, hence plans for such projects should not be carried to the point of unbalancing the national economy and stifling private initiative.

Curtailment of civilian construction during the war has built up an accumulated demand for public construction projects. Many such projects will be most useful immediately following the war in meeting an acute unemployment condition if detailed drawings, specifications, and contract documents can be prepared before the war ends. Contracts can then be let to provide flexibility in using such construction projects to the best advantage of the nation's economy.

Common sense dictates that these projects be those that will best meet immediate postwar needs. Long-range projects such as a great system of superhighways, extensive projects for flood control, power or reclamation of waste lands, the revamping of transportation facilities and terminals or the development of great airports that require years of planning cannot be made a part of that program. However, so far as practical, the projects for immediate needs should be fitted into long-range planning.

Self-liquidating projects

Most states have laws that permit financing certain types of public improvements on a revenue-bond basis. Such bonds are not general tax obligations, being financed out of tolls or charges and so do not affect debt limits.

Projects coming into this classification include the following:

Water supply and distribution systems
Water purification plants
Sewerage systems
Sewage disposal plants
Public swimming pools
Hospitals
Large housing projects
Public markets
Off-street parking facilities
Street improvements to give access to private property
Express and limited access highways, highway tunnels and toll bridges
Irrigation and drainage projects

Non-revenue facilities

Many types of public facilities normally financed out of general taxation that would have been undertaken in normal times can be undertaken promptly following the war if plans and specifications have been drawn and financing has been arranged. These include:

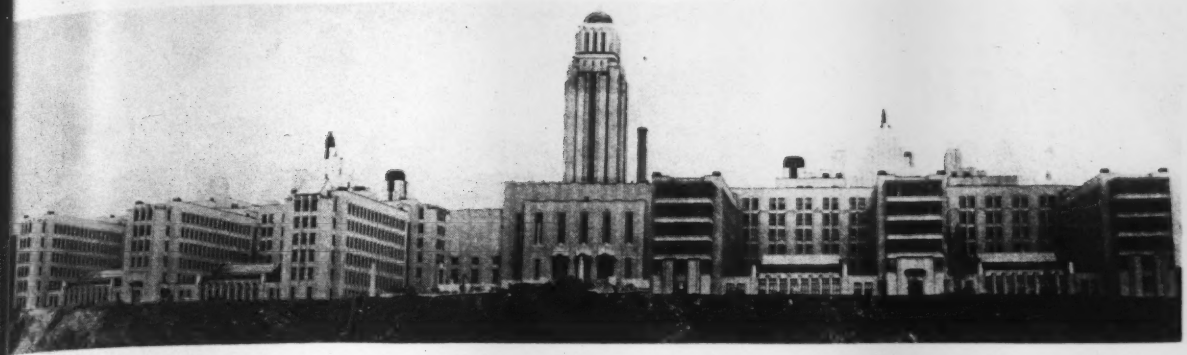
Public schools
State university buildings
Libraries
Municipal buildings
State buildings and institutions
Parks and recreation facilities
Public highways and urban street improvements
Flood control projects of local significance

Outstanding bond issues for public improvements are being paid off during the war period to such an extent that many local political units can incur additional bond indebtedness within legal limitations.

Federal aid highways

Public highways and streets have deteriorated during the war period, thus adding to the actual deficiency that existed in the country's highway system before the war due to the inability of the states to keep pace with the growth of highway requirements. It has been estimated that 3.6 billion dollars of construction, reconstruction and modernization will be required to make up the accumulated deficiency. To this must be added the new construction, and replacement of highways wornout during the war period.

Major requirements for postwar highway work will be: modernization and reconstruction of state trunk highways and



The new University of Montreal buildings present an "Unfinished Symphony"

After years of delays and repeated financial setbacks, the University of Montreal officially opened its new buildings on Maplewood Ave., Montreal, Que., a few weeks ago.

Work has not been completed on the new structure. Recent substantial grants from the Provincial government were intended to help university authorities to complete the buildings as soon as possible after no progress had been made on the construction for almost two years, but difficulties encountered by contractors in obtaining necessary materials will delay the completion of the buildings for a year or more.

The new buildings, when completed, will house the faculties of medicine, science, dental surgery, law, pharmacy, optometry and letters. Other schools, such as the Ecole Polytechnique, and the Ecole des Hautes Etudes Commerciales will continue to operate at their old locations in the city. The faculties which are to be located in the new building have already moved and are in operation.

The new structure has something in common with the Pentagon Building in Washington—one easily gets lost in its miles of hallways.

One of the most impressive rooms is the Hall of Honor with its marble pillars. From this room the visitor enters the auditorium, which has a seating capacity of 1,400. The library will be in the upper stories of the Hall of Honor.

of arterial streets in cities and villages; express highways of the limited-access type; off-street parking facilities; belt lines and by-pass routes; construction of a relatively large mileage of inter-regional highways; major improvements to county trunk highways and feeder highways now designated as the secondary highway system.

The highway and street field presents one of the best opportunities for preplanning of projects for immediate construction following cessation of hostilities. Fortunately, the nation-wide planning surveys made heretofore by the Public Roads Administration and the state highway departments provide essential data for such planning.

Financing public works

The real need at present is to offset the stagnation that exists in many parts of the country with respect to securing necessary funds for postwar projects. Where state or local laws prevent the immediate financing of the necessary planning for local public works it may become necessary for Congress to authorize a revolving fund and a system of making loans as a means for getting such work under way. To this end, it is recommended that Congress make available a substantial appropriation for assistance to public agencies in preparing detailed plans and specifications for useful construction projects. Obviously, no funds should be allocated for advance plans until a project has been reviewed by a proper agency of the federal government and a showing has been made that it is actually needed and is economically sound.

Upon such a showing, the federal government might well advance a sum sufficient to cover the total cost of plans and specifications, with the provision that if and when the project is financed and is put under construction the amount advanced for plans, specifications and contract documents should be refunded to the federal government.

Federal building work

Some planning for federal public works that might be undertaken in the postwar period is already under way and all agencies engaged in the various forms of construction for the federal government are surveying projects which profitably could be undertaken. It is recommended that appropriations be made now so that these departments may proceed promptly in preparing detailed plans and specifications. The following criteria should apply to such federal projects: (a) project shall have practical utility and be economically sound; and (b) it shall be of such a character as not to compete with facilities provided through private enterprise.

Cooperation needed

If a program of postwar construction is to be effective, the energetic cooperation of professional, civic, business and labor organizations and of executive and legislative branches of federal, state and local governments is needed and is solocited. Preliminary studies, preparation and plans and specifications, arrangements for financing and acquisition of real estate must be completed before construction can be begun. To preserve economic freedom, the freedom of enterprise which is characteristic of the American way of life, the preliminary work must be done now. It will be too late if the work is not done until the war is over.

Following the adoption of the above statement of policy, the board gave concrete form to its belief in the importance of such an undertaking by appropriating $15,000 to permit the employment of a full-time member of the staff to handle the work of the Committee on Postwar Construction and to make it possible for the society to assist local bodies in the development of such a program.

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Oil and water mixed in Norris City reservoir

About 5,000 barrels of oil poured into the north section of the Norris City, Ill., water storage reservoirs after a valve in the Big Inch oil pipeline from Texas to the East gave way on Aug. 6.

At the time of the mishap water was being taken from the south basin so the water supply was not contaminated. However, it took a week to clean out the north basin and restore it to service. A new valve was installed promptly, but a considerable amount of oil was pumped through the break before it was discovered.

The first crude oil to reach the east coast poured into storage tanks at Marcus Hook, Pa., on Aug. 15.

Oil shipments out of Norris City have declined markedly since the 24-inch pipeline went into service. Only about 400 carloads of oil are now loaded daily compared with 1,200 carloads previously.

MEN AT WORK

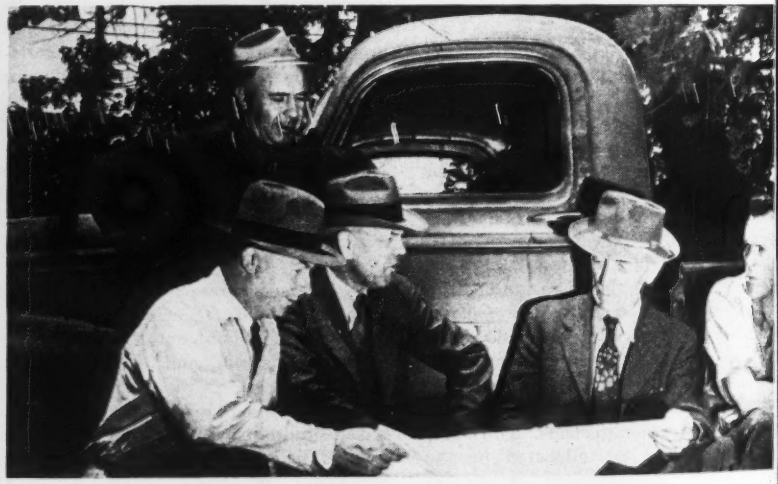
U. S. Army Signal Corps Photo

Army engineers recently directed flood fighting along the White River. Col. Jarvis J. Bain, district engineer (center), is here shown discussing problems with Col. R. H. Nicholson of the 359th Engineer General Service Regiment (right) and Col. R. M. McCutcheon, head of the flood fighting group at Camp Claiborne.

Few American instructors have taught more civil engineering students than C. T. Morris, professor of civil engineering at Ohio State University. Professor Morris began his teaching duties in 1906, after several years of practical experience.

Working on new shipyard problems are, from left to right, William J. McMinn, Assistant Project Manager, R. M. Totten, Project Manager, and S. G. Timblin, General Superintendent, all of W. F. Trimble & Sons Co., which has the chief subcontract under Dravo Corporation in the expansion of facilities at Dravo's Wilmington, Del., shipyard.

T. J. McCormack, left, chief engineer and Nelson Tallman, superintendent, for McCloskey & Co. of Philadelphia in Florida. An ingenious and low cost series of ship construction basins and concrete ship building on a rush schedule is keeping them away from resort areas, however.



Driving and lining 5 mi. of tunnel on the Pit River project of the Pacific Gas and Electric Co. calls for special engineering talent and here it is in conference. Seated, left to right, H. W. Haberkorn, engineer of hydro construction; O. W. Peterson, chief engineer, construction department; G. M. Wehrle, superintendent, Pit River project, and George Thacher, resident engineer. Standing is J. E. Cooney, resident manager.

Flooded Arkansas lands restored by the Army

A total of 23,000 acres of rich Arkansas River bottom lands damaged by floods last May have been restored to productivity through efforts of the 519th Quartermaster Truck Regiment of Camp Robinson, as reported by their commander Col. W. E. Barott.

The 12 negro companies, only remaining troops in the flood devastated fields, are a part of the troop assignment made by the Eighth Service Command. Work in Pulaski, Conway, Pope, Logan and Johnson counties completed by these companies includes: Erection of 60 miles of fencing; construction of 20½ miles of drainage ditches; rehabilitation and salvage of 136 farm buildings; repair and reconstruction of nine miles of roads; recovery of sand and silt-covered farm machinery; culvert repairs; re-establishment of former drainage systems and construction of new drainage systems where the floods changed the contour of the land; removal of heavy logs and driftwood; cutting and making thousands of fence posts; leveling sand drifts on tillable land; and filling large flooding holes in farm fields. It is expected that the usual crops will be raised on these lands this year.

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Equipment for war use released by pooling plan

Construction equipment worth $75,000,000 has been released for use by the armed forces through the pooling of equipment owned by state, county, and town public works agencies, according to M. B. Garber, chief, Construction Machinery Division, War Production Board. Mr. Garber's announcement was made following conferences with officials from the 38 states that are cooperating in the pooling plan (*ENR* July 22, p. 177). Inaugurated some months ago (*ENR* March 4, p. 321), the pooling plan has as its objective cutting down the amount of equipment purchased by public agencies to maintain essential civilian services.

This cooperation, despite conflicting and varied local laws, has enabled an estimated 150,000 to 175,000 tons of carbon steel to be diverted to new machinery construction for the armed forces, rather than having this quantity of critical materials go into a normal replacement program for home front use.

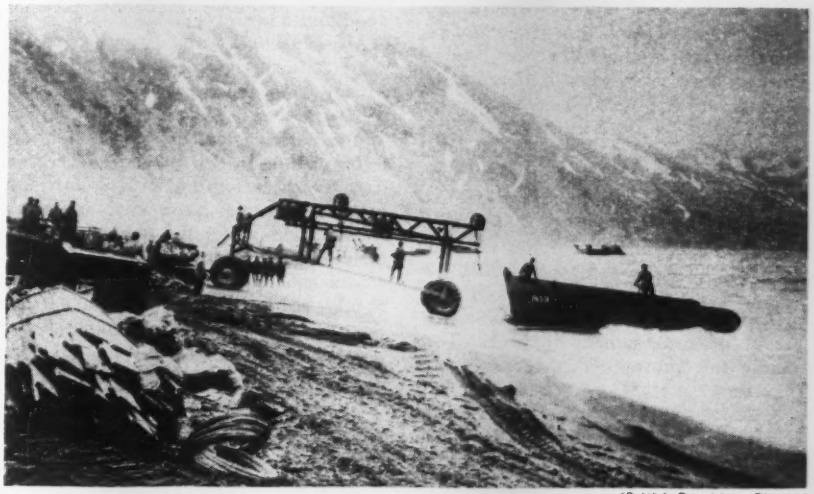
Through a system of compulsory registration of all used construction machinery, the division has tallied more than 350,000 pieces of equipment and through regional offices, staffed by practical construction men, has set up procedures for transferring any idle machinery to points where it is required.

New heights of ingenuity have been reached by engineers assigned to assist state, county and municipal groups, as well as contractors, in keeping these machines operating at maximum capacity. Not limiting themselves to suggestions for the exchange, loan or rental of entire machines, these engineers have even set up an exchange system for parts, including a scrapping procedure which frequently finds two or three pieces of worn out equipment finishing out a re-useful life as a hybrid machine.

WPB stop order lifted on Cleveland road project

The War Production Board stop order that has held up construction of the $513,000 Clinton Ridge Road in Cleveland, Ohio, has been lifted and work will be resumed immediately, it has been announced by State Highway Director H. G. Sours.

This project will provide an access road of four divided traffic lanes to the General Motors diesel plant and the Farwick Corp.



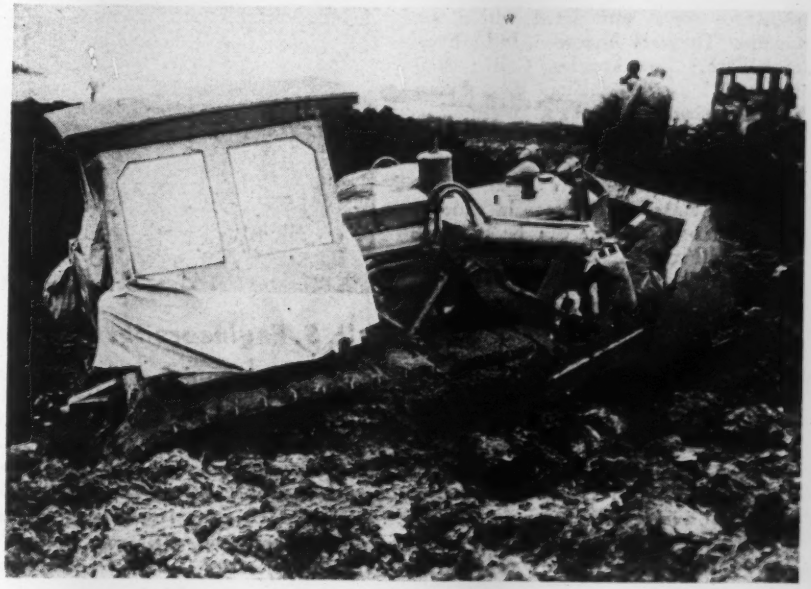
(British-Combine Photos)

Drydock with wheels for invasion craft

From Navy operations in the Aleutians comes this picture of the "geeheebee" a strange craft used to beach and salvage craft used in landing operations. Tractor drawn, the rig can go out in the surf, even a way over its own depth, buoyed by the two rows of empty gasoline tanks seen on its upper "deck."

Chain hoists are used to lift the craft being salvaged and the whole rig can be pulled in by a line from the tractor if water is over the tractor's depth.

Thirty yards inland from the beach the bulldozer pictured below was bogged in the mud temporarily, but eventually it was released to do its part in helping our engineer troops to bring order out of chaos in Attu.



WASHINGTON HIGHLIGHTS

Because it requires different wording, though no basic difference in treatment, a separate regulation concerning terminated construction contracts will be issued by the War Department within about a month. Such contracts are not covered in the lengthy procurement regulation just issued by the department.

Hearings on two applications to construct nearly 1500 miles of natural gas mains leading from the Hugoton gas fields are to be held by the Federal Power Commission late in August. A hearing will be held soon at Kansas City, Mo., on an application of the Cities Service Transportation and Chemical Co., Ponca City, Okla., a newly organized affiliate of Cities Service Gas Co., for permission to construct a 26-in. line extending 231 miles from the Hugoton gas field in Texas County, Okla., to Cities Service Gas Co.'s Blackwell compressor station in Kay County, Okla. Approval of construction of facilities to handle the gas to be delivered is also requested.

A 22-in. line which the Hope Natural Gas Co., Clarksburg, W. Va., seeks to build would extend 1,140 miles from the company's existing facilities in Kanawha County, W. Va., to a point in or near the Hugoton field in southwestern Kansas.

Ten areas in the United States have been added by the War Manpower Commission to the 40 previously designated as acute labor shortage areas. Three of them, Butte, Mont.; Eureka, Calif.; and Hawaii were classified and added to the list for the first time. The other seven were taken from the list in which labor shortages were anticipated within six months. They are Anderson, Ind.; Everett, Wash.; Los Angeles, Calif.; New Bedford, Mass.; Oklahoma City, Okla.; Racine, Wis.; and Spokane, Wash.

All California areas but the 15 already listed as having an acute shortage or liable to one within six months have just been classified as areas in which a general labor shortage can be expected after another six months.

The Dayton-Springfield, Ohio, area alone has been removed from the acute shortage group.

Incomplete returns of questionnaires sent to a ten per cent sampling of the country's lumber yards in a survey being made by the War Production Board's Lumber and Lumber Products Division indicate heavy reduction in lumber inventories during the past six months. About half the questionnaires are yet to be returned. Some yards report they have had to close because they can not get needed species, grades and sizes of lumber.

Basic mill prices on hardwood and softwood lumber have advanced, effective Aug. 10, ten percent as a result of increased labor wages for lumber workers approved July 9 by the director of Economic Stabilization. The increase was authorized by the Office of Price Administration. There are certain exceptions. Among softwoods, the increase does not apply to plank and timbers of hemlock, mixed northern softwood, nor western white spruce. There are certain hardwood and other exceptions also.

Also effective Aug. 10 are "interim price ceilings" for six additional areas on softwood lumber sold through distribution yards. This brings 82 percent of the nation's lumber yards under interim ceilings which are, in effect, transitional prices for use until dollars-and-cents ceilings for each area are established. Ceilings for the remaining areas, including the northwestern states, Wisconsin and upper Michigan, and for the South, are to be issued soon. Prices established are at a level comparable to those of March, 1942.

Ceiling prices on western piling, effective Aug. 2, have been set by the Office of Price Administration as slightly below those charged in March, 1942. Prices for poles are, generally speaking, the same as of that date. Separate schedules of prices are provided for western red cedar, Douglas fir and lodgepole pine, both for poles and piling. A "basing point" system of calculating transportation charges in accordance with industry practice has been set up, the basing point cities being Seattle and Bellingham, Wash.; Portland, Ore.; and Arcata, Calif.

Harry W. Bashore, who has been acting commissioner of the U. S. Bureau of Reclamation since the resignation of John W. Page, has been appointed commissioner. William E. Warne has been appointed assistant commissioner.

Higher costs of rights-of-way confront highway departments planning post-war construction in rural areas. The U. S. Department of Agriculture announces that farm real estate values for the first time since 1931 average higher than the pre-World War I level in over two-thirds of the states.

U. S. Engineers throw a ponton ferry across the Thames

This picture shows some of the activities of American engineers in England. A ponton ferry is being established on the upper reaches of the Thames River, as a bridge building exercise. The half-track gun carrier is being ferried across to "hold" the bridgehead while the bridge is being built. This is training for the real thing, and nothing is taken for granted.

An article entitled "Training Engineer Troops is England," by Waldo G. Bowman, Editor of Engineering News-Record, will appear in the September 9 issue. It will tell how our engineer troops in England are being employed on a variety of construction operations designed to give them valuable experience in working under conditions and with materials simulating those to be found in Europe when the coming invasion of the continent takes place.

WLB seeks new procedure in "defiance" cases

A new proposed compliance policy of War Labor Board, which would establish a uniform procedure in dealing with defiance cases, is awaiting consideration by President Roosevelt who alone can authorize such changes. It would do away with the necessity of referring each separate case of defiance to the White House.

The proposal, it is understood, is to authorize WLB to impose a dual set of sanctions, one on employers, the other on unions, and to provide some form of punishment for those who refuse to comply with WPB orders. For employers, for instance, whether they were industrialists or contractors, the punishment might be to take away their priorities for materials.

While there were only six cases of defiance of the board during the year and a half preceding the current coal case, there are now 16 cases pending. One is that of the McGeorge Contracting Co., Little Rock, Ark., which has been in defiance since last March when the board ordered the company and members of the International Union of Operating Engineers to include in their contract a clause providing for voluntary maintenance of membership.

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More private builders enter war housing field

Applications for priority assistance by private builders of war housing is increasing and the increase is credited by the National Association of Home Builders mainly to a modification of the National Housing Administration's and the War Production Board's new joint policy agreement which permits builders to sell a third of the units in any new housing program immediately upon completion, without first renting them for a period of time. Thus contractors not in a position to become long-term landlords can build and sell some of their housing promptly.

It is estimated that about 85 percent of private housing is financed by means of mortgages processed through FHA. Since contractors submit only plans likely of approval, the mortality rate is low. However, the rule of accepting applications only up to 110 percent of the quota for any region still holds. Allowing 60-90 days between the time applications for priority assistance are filed and the time construction gets under way, it is expected that there will be a considerable increase by the end of August in the number of units put under construction.

The increase in applications for construction by private builders has changed considerably the proportion of such work to government construction. In the Northwest, for instance, privately financed construction has risen from ten percent to 50 percent of the total.

With copper and steel coming through satisfactorily under the Controlled Materials Plan, builders report that their main materials problem now is to get lumber.

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Plan 50 high-speed roads for postwar Britain

The Institution of Highway Engineers of Great Britain has prepared for the government plans for postwar construction of a system of high-speed highways that will permit safe motoring at 100 mph.

Fifty routes have been mapped connecting all important towns without passing through any of them. At the proposed speed, a motorist could drive from Manchester to Edinburgh in 90 minutes. The plans provide for refreshment rooms, sleeping quarters, first-aid stations, gasoline service stations and garages at convenient intervals.

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Sewage treating method to be tested at Ann Arbor

A series of eight tests are being made at the sewage treatment plant of Ann Arbor, Mich., to test the efficiency and capacity claims made for the Mallory oxidized-sludge process of sewage treatment. Ordinary plant equipment is used in this process in which a new method of control is involved.

In order to meet representative situations in sewage treatment, eight tank and chemical combinations will be used. Each test will be run one week.

All tests will be supervised by W. F. Shepard, engineer for the Michigan health department and the inventor of the process, E. B. Mallory of Hackensack, N. J. Results of the tests will be checked at Michigan State College and at the public health school at the University of Michigan. The tests are sponsored by the state health department, the university, the college and the city.

Arrangements for the series of tests were made at a meeting of 35 health and sanitary engineering experts employed by the State Stream Control Commission, the U. S. Public Health Service, the New York, Wisconsin and Illinois health departments, the Great Lakes and Upper Mississippi divisions, U. S. Engineer Department, and the cities of Muskegon, Muskegon Heights, Lansing and Jackson, Mich.

Merchant shipbuilding ahead of quota at midyear

Despite slight delays due to some yards' having to convert their facilities from Liberty Ship building to construction of oil carriers, United States shipyards during the first seven months of 1943 delivered into service 1,046 new merchant vessels, aggregating 10,485,500 deadweight tons. Construction is at nearly peak capacity, and is more than one-half the scheduled production of 19,000,000 deadweight tons of merchant ships and special craft for the armed services by the end of this year.

The July output was 158 new vessels with a deadweight tonnage of 1,670,700 according to a Maritime Commission announcement. While this is nine ships short of the previous month's production, tonnage is but 300 tons less, due to construction of large units in July. Of the 158 new ships, 109 were Liberty Ships, 16 were fast C-type cargo boats and 16 were tankers.

Emphasis on oil carriers

The seven months' total includes 88 oil tankers with a deadweight capacity of 1,013,000 tons, as compared with 62 tankers totaling 998,200 tons constructed during all of 1942. Most are tankers of 16,600 deadweight tons, with a 135,000-barrel capacity. These ships are now delivered approximately 100 days after their keels are laid, which is just half the time required at the beginning of 1942.

Production schedules call for delivery of 511 additional tankers of all types by the end of 1944, of which 424 will be of the 135,000 bbl. class. The oil-carrier program is being further augmented by conversion of 102 Liberty Ships, 2 already on the ways, into 65,000 bbl. oil carriers to help alleviate the oil shortage on the east coast, and to make deliveries for military use.

Shipbuilding next year

The Maritime Commission said on Aug. 12 that a tentative 1944 merchant ship construction program has been agreed upon that is about the same size as this year's program, around 20,000,000 deadweight tons. The total number of ships for 1944 will run between 1,800 and 2,000, it was said.

Of the total, 319 vessels will be the new, fast "Victory" ships, on which the first keels will be laid in December. All will be completed in 1944, a commission spokesman said.

All the speedy C-type cargo vessels programmed for next year will be built, the spokesman said, adding that a total of more than 500 fast ships of the Victory and C-type were scheduled for 1944. This is about one-fourth of the contemplated objective.

Available carbon steel below urgent requirements

Available carbon steel is about one-fifth less than the amounts requested by the 16 claimant agencies for the fourth quarter. Total requests amount to a little more than 19,500,000 tons, as against an estimated supply of slightly under 15,500,000 tons.

In making allotments, the War Production Board made an over-all reduction of about 13 percent of claimants' requests, in contrast to a 25 percent reduction the third quarter. Requests of the Army, Navy, Aircraft Resources Control Office, and Maritime Commission were reduced about 9 percent; and all others, including those for exports, were reduced about 17 percent.

Allotments are final. The Requirements Committee of WPB announces that it will not entertain requests for supplemental quantities during the quarter, as it has done in the past.

The transportation industry alone gets 1,380,000 tons of carbon steel for "A" products, with requisite amounts of alloy steel, copper, and aluminum. Of this total, the railroad industry gets the largest amount—400,000 tons of replacement rail, 240,000 tons of track accessories, and 300,000 tons of other maintenance materials. This means that the railroads will receive during 1943 a total of 1,527,000 tons of new replacement rail as compared with 1,300,000 tons in 1942.

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Civil engineering listed as critical occupation

Civil engineering is listed as one of the "critical occupations" in the new rules issued Aug. 14 by the War Manpower Commission for the administration of the Selective Service System. This list covers occupations and skills of which there is an inadequate supply in war industries.

Under the heading of professional and scientific occupations is the following:

ENGINEER, PROFESSIONAL OR TECHNICAL

This title covers persons who are actually engaged as engineers in the operating, research, or teaching phases of these professions, who are qualified either by having met the educational requirements or because of long experience. In addition, this title is intended to include those individuals who may specialize in certain phases of the professions listed, below, such as mechanical engineers who specialize in the automotive, heating, or refrigerating engineering field but whose special designations have not been mentioned:

Aeronautical	Marine
Agricultural	Mechanical
Ceramic	Metallurgical
Chemical	Mining
Civil	Petroleum
Communications	Radio
Electrical	Safety

Under the new rules, men possessing these skills and not now in a war industry will lose their occupational deferment unless they shift over into such an industry.

JOBS OF THE WEEK

EARTHWORK and STRUCTURES, California

Bureau of Reclamation, Sacramento, awarded contracts for constructing earthwork and structures for section of Madera Canal, Friant Div., Central Valley Project, Fresno County. Schedule 1 went to Larsen Brothers and Harms Brothers, Sacramento, at $488,689. Schedule 2 was let to Oberg Brothers, Los Angeles, at $135,371. Bids were asked on the project July 19.

GRADING, PAVING and DRAINAGE, New York

D. W. Winkelman Co., Syracuse, N. Y., has been awarded contract for grading, paving, drainage, Jefferson County, by U. S. Engineers, Syracuse, $657,000.

IMPROVEMENTS, Florida

Standard Construction Co., Columbus, Ga., was awarded contract by Bureau of Yards & Docks, Navy Dept., Washington, D. C., for improvements to outlying fields at Naval Training Center, $678,000.

ARMY AIR FORCE INSTALLATION CONSTRUCTION, New York

U. S. Engineers, Syracuse, N. Y., awarded a contract for construction at Army Air Forces installation, Erie County, to Poirier & McLane Corp., New York, N. Y. The estimated cost is in excess of $1,000,000.

WAREHOUSE, Terminal Island, Calif.

Bureau of Yards & Docks, Navy Dept., Washington, D. C., awarded a contract for the construction of a 5-story warehouse, to G. A. Bell Engineering Co., Los Angeles, Calif., at $1,060,889.

REBUILDING PLANT, Ohio

Brown Construction Co., Cleveland, O., will rebuild plant for Canton Drop Forging & Manufacturing Co., Canton. The estimated cost is $2,000,000. McGeorge & Hargett, Cleveland, O., are the engineers.

HOUSING, Alabama

Public Housing Authority, Atlanta, Ga., awarded a contract to Algernon Blair, Montgomery, Ala., for housing. The bid for one schedule was $687,480, and $229,480 for another. P. W. Hofferbert, Gadsden, Ala., is the architect.

HOSPITAL, Bridgeport, Conn.

Edward H. Bray Co., Bridgeport, Conn., was the lowest bidder for the construction of an addition and nurses' home for St. Vincent's Hospital, Bridgeport, Conn., at $815,357. J. Gerald Phelan, Bridgeport, is the architect.

BRIDGE, Needles, Calif.

Atchison, Topeka and Sante Fe R. R. Co., G. W. Harris, chief engineer, Chicago, Ill., awarded a contract to construct the superstructure of a railroad bridge over the Colorado River to American Bridge Co., Pittsburgh, Pa. Cost will exceed $500,000.

HOUSING, New Orleans, La.

Edgewater, Inc., New Orleans, La., awarded a contract to construct houses to Kelly-Generes & Rittiner, New Orleans, La., for $764,000.

HOUSING, California

Stolte, Inc., Alameda, Calif., was the lowest bidder for constructing the Estuary War Housing Project, when the Housing Authority of City of Alameda opened bids at $2,510,000. PHA will finance. Andrew T. Hass, San Francisco, and Carl H. Warnecke, Oakland, are the architects.

CLEARING, GRUBBING, Georgia

U. S. Engineers, Savannah, will clear, grub, grade and pave in Lowndes Co. The contract has been awarded to MacDougald Construction Co., Atlanta, Ga., at $522,000.

HOUSING, Pennsylvania

Tobias Heller & Co., Inc., New York, N. Y., was the lowest bidder at $1,827,000 on dwelling units, when Public Housing Authority, New York, N. Y., opened bids. Wigham & Lee, Phila., Pa., are the architects.

ROADS, California

J. A. Casson and N. M. Ball & Sons, Berkeley, Calif., have been awarded a contract for grading, portland cement paving 8.9 mi. between north city limits of Vallejo and Suscol Creek, Solano and Napa Counties, by the State Division of Highways, Sacramento, Calif. The estimated cost is $641,894.

Note—Additional bidding and contract news on many projects large and small appear in the Construction News section beginning on page 15.

MEN AND JOBS

A. L. Anderson, public relations ., Little Rock, Ark., district, U. S. neers, has announced that **Capt. er J. Buchanan,** former area engi- Air Support Command Base, Pol- La., has been given duties at Little as assistant to the district engineer, eering division.

r R. Humphrey, Temple, Tex.; **m P. Stewart,** Graham, Tex.; **lin Fisher,** Brenham, Tex., and **J. Porter,** Caldwell, Tex., have re- d appointments from Governor Coke evenson to the board of directors of razos River Conservation and Recla- n district for six year terms.

Herbert D. Vogel, district engineer, Army Engineers stationed in Pitts- , will shortly begin a new assign- **Col. Gilbert Van B. Wilkes,** in e of the ROTC at the University of is and formerly department engi- in the Philippine Islands, will suc- Colonel Vogel, who has served in burgh three years—in charge since 1942. He completed the construc- of the Berlin, Youghiogheny and lhanna flood-control dams.

. Harty, Grand Forks, N. D., county neer since 1934, has been ordered to t for active duty with the U. S. and will be assigned to an aviation n in Rhode Island as a special e officer.

T. Tucker, secretary and chief en- r of the North Dakota Water Con- tion Commission and North Dakota engineer, has been commissioned a enant in the Navy Seabees and or- d to report for duty.

. Wallace, Independence, Ia., Bu- an county engineer, has been com- oned a lieutenant (j.g.) in the Navy es and has reported to Camp Perry, lamsburg, Va.

an T. Hagestead, consulting engi- and mayor of River Falls, Wis., has ted a commission as first lieutenant e army.

d W. Heiman and **Ira K. Hearn** been promoted to colonel and ma- respectively, at Camp Butner, N. C., e they are attached to the Engineer bat Group.

R. Littrell, president of the Littrell racting Co., of Opelousas, La., has commissioned a captain in the U. S. . Corps of Engineers, is now serv- verseas.

T. W. Kinnear, chief of the bureau of construction of the Ohio State Highway Department, has resigned to join the construction executive staff of the Horvitz Co., of Cleveland, Ohio, highway contractors.

This announcement was made by Hal G. Sours, state highway director.

Reuben O. Nelson, of Worthington, Ohio, has been named to succeed T. W. Kinnear. Nelson, who is a graduate of the University of Illinois, became associated with the Ohio Department of Highways in 1930, serving as bridge engineer in the Central Ohio division until 1939, when he was placed in charge of the WPA program sponsored by the department. Later he became traveling engineer for the bureau of construction, in which capacity he served until May, 1942, when he was appointed coordinator of bituminous materials. Prior to entering the service of the state he helped to design the Ashtabula viaduct in 1930.

Leroy C. Edkins has been appointed district superintendent of highways in Cambria county, Pa.

Claud J. Rogers was appointed Jefferson county, Ala., engineer July 14 by the county commission.

Albert V. Dolan has been elected chief engineer of the Fort Pitt Bridge Works, Pittsburgh, Pa., succeeding the late Charles G. Schade. Dolan had worked for McClintock-Marshall Construction Company for one year. He was graduated in 1914 from Carnegie Institute of Technology and was employed by the Fort Pitt Bridge Works in 1914 as a designing engineer. Following World War I, he obtained a leave of absence July 1, 1919, to become structural engineer of construction for two years on rolling mill buildings for Weirton Steel Co., Weirton, W. Va.

Western company sues for loss on sand contract

The Grimmett Construction Co. of Oklahoma City, Okla., has filed suit in federal district court at Muskogee, Okla., to collect $106,232 damages from Brown & Root, Inc., and W. S. Bellows, Houston, Tex., contractors, for alleged misrepresentation of sand pits from which the Grimmett Company was to produce sand for concrete construction work on the Naval ammunition depot at McAlester, Okla.

The plaintiffs allege that the company was induced to enter a contract for production of 300,000 cu.yd. of sand for $1.28 per cu.yd. by representations of the defendants that the pits from which the sand was to be dug were free of boulders and comparatively lightly covered. According to the petition, the plaintiff found this not to be a fact and so informed the defendants, but was asked to continue the work, nevertheless. The plaintiff company was paid only $42,888. There were so many boulders and the sand was of such limited quantity, the petition states, that it became necessary for the Grimmett firm to spend $149,121 to get it out.

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Associations to plan waterworks and sewerage

A Committee on Water and Sewage Works Development, representing the concerted effort of The American Water Works Association, the New England Water Works Association, The Federation of Sewage Works Associations, and the Water and Sewage Works Manufacturers Association, is now organized to promote planning of water supply and sewerage works—primarily postwar but also now—if clearly needed in support of the war effort.

Abel Wolman is general chairman of the activity. Headquarters for administrative purposes will be in the office of the American Water Works Association, 500 Fifth Avenue, New York 18, N. Y. E. L. Filby of Kansas City has been obtained on a leave of absence basis from his work in the Black and Veatch organization to act as field director of the development committee work. His preliminary contacts will be through conferences of water and sewage men that have been scheduled from September through November.

The Committee on Water and Sewage Works Development has been organized to make known that every city is entitled to have, and with good management, is able to pay for an adequate, safe and satisfactory water supply, and likewise that it should be able to dispose of its wastes in a manner that offends no one.

OBITUARY

John Wilson, 67, former city engineer and sanitation expert for Mankato and Duluth, Minn., died recently at Duluth. He was city engineer at Mankato from 1908 to 1912 and designed the water system there. He was city engineer at Duluth from 1912 to 1933. He later worked as an engineer for the Canadian government and for the city of Superior, Wis. For the last several years he was a consultant engineer at Duluth.

J. Carson Agnew, 60, consulting engineer and vice president of Winston Bros., Co., died July 27 in Pasadena, Calif. He had been identified with the Colorado River aqueduct and the Morris Dam construction projects.

James Chisholm, 86, construction engineer, died at Windsor, Ont., July 26. Born in Nova Scotia, Mr. Chisholm went to Windsor 25 years ago with the Canadian Bridge Co. Ltd., and the Canadian Inspection & Testing Co. Earlier he worked on the construction sections of the Canadian Pacific Railway in Ontario, Quebec and Nova Scotia, and on bridge projects in Quebec and Ontario. During the building of the Detroit-Windsor tunnel he was in charge of fabrication of tubes.

Clarence G. Norris, 76, retired engineer, connected with the Boston public works department for about 40 years and at one time engineer of Hyde Park, Mass., died at Boston, Aug. 1.

Robert Townsend, 70, for many years a building contractor in Rhode Island, died at Riverside, R. I., August 3. He was superintendent of construction on the Bridgeport, Conn., courthouse and of the Hotel Commodore, New York City.

Arthur H. Coy, 52, superintendent of the Westerly, R. I., water and sewer departments, died in Boston August 3.

Joseph Edmond Workman, 61, steel construction engineer, died in Salt Lake City, Utah, on August 4. Mr. Workman recently returned from Seattle, Wash., where he was an engineer for the Austin Co. He supervised erection of the Reynolds metal plant, receiving an award for the work. He had supervised steel construction work on the Boeing airplane factories, Narrows Bridge at Tacoma, and for the American Smelting & Refining Co. in Tacoma.

William A. Sherman, 48, civil engineer and draftsman, died at Yonkers, N. Y., on Aug. 5. Mr. Sherman had been employed as an engineer by the Thomas Murray Contracting Company, of New York City; the De Laval Manufacturing Company, of Trenton, N. J.; and the New York Central Railroad.

Hiram Jerome Patterson, 50, recently nominated in the Mississippi primary election to succeed himself as state highway commissioner, died Aug. 9.

Virgil D. Allen, formerly of Columbus, Ohio, and for many years a consulting engineer in Cleveland, died in that city August 7.

G. C. Flemming, 57, superintendent of the Enterprise, Ala., waterworks [illegible] for the past 30 years, died August 5.

Sturgis Griffin Walker, Sr., Memphis, Tenn., resident engineer of the Tennessee highway department, died August 5.

Thomas Earle, 77, bridge engineer, [illegible] in Philadelphia, Pa., on Aug. 15. A graduate of Rensselaer Polytechnic Institute, he participated in design [illegible] construction of the Delaware River Bridge between Philadelphia and Camden, N. J., and bridges over the East River at New York, and over the Niagara River. He was president of Thomas Earle & Sons, Inc., Philadelphia.

CONTRACTS AND CAPITAL

CIVIL ENGINEERING construction volume in continental U. S. totals $41,648,000 for the week. This volume, not including the construction by military combat engineers, American contracts outside the country, and shipbuilding, is 31 percent higher than in the preceding week, but is 82 percent lower than in the corresponding 1942 week.

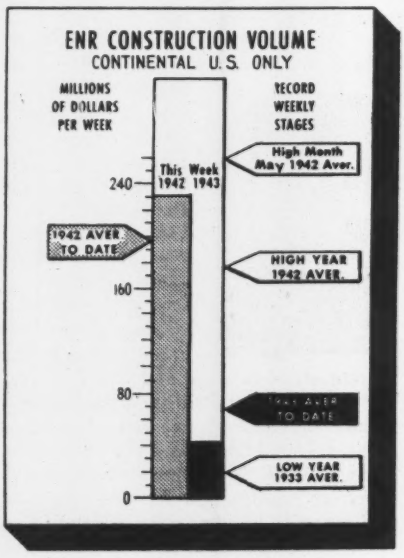
Private construction gains 116 percent over last week, and public work is up 21 percent due to the 3 percent gain in state and municipal construction, and the 24 percent gain in federal work. Comparisons with a year ago reveal private construction 13 percent higher, and public down 85 percent.

The current week's volume brings 1943 construction to $2,183,450,000, an average of $66,165,000 for each of the 33 weeks of the period. On the weekly average basis, 1943 construction is 66 percent lower than the $6,702,099,000 for the 34-week period in 1942. Private construction, $272,217,000, is 35 percent lower than in 1942, and public work, $1,911,233,000, is down 69 percent when adjusted for the difference in the number of weeks.

In the classified construction groups all classes of work top their respective totals for a week ago; and bridges and industrial buildings gain over their 1942 week totals.

New capital for construction purposes for the week totals $585,000, and is made up of $498,000 in state and municipal bond sales, and $87,000 in corporate security issues.

New construction financing for the 34 weeks of 1943, $2,925,355,000, is down 68 percent compared with the $9,[illegible]774,000 for the 34-week 1942 period.



CONTRACTS

Continental U. S. Only
(Thousand of dollars)

	Week Ending Aug. 20 1942	Aug. 12 1943	Aug. [illegible] 1[illegible]
Federal	$217,040	$23,781	$2[illegible]
State & Municipal	7,184	4,613	[illegible]
Total public	$224,224	$28,394	$3[illegible]
Total private	6,482	3,379	[illegible]
TOTAL	$230,706	$31,773	$[illegible]
Cumulative 1943 (33 weeks)			$2,18[illegible]
Cumulative 1942 (34 weeks)			$6,70[illegible]

Note: Minimum size projects included: Waterworks and waterways projects, $[illegible]; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	1942 34 weeks	Cumulative 1[illegible] [illegible] weeks
NON-FEDERAL	$550,876	$27[illegible]
Corp. Securities	164,324	[illegible]
State & Mun.	175,433	[illegible]
R.F.C. loans	128,419	[illegible]
FPHA loans	.....	[illegible]
R.E.A. loans	.....	[illegible]
Fed.-Aid Hwy.	82,700	[illegible]
FEDERAL	$8,966,898	$2,6[illegible]
TOTAL CAPITAL	$9,517,774	$2,9[illegible]

ENR INDEX NUMBERS

Index Base = 100		1913	[illegible]
Construction Cost	Aug. '43	291.38	[illegible]
Building Cost	Aug. '43	228.49	[illegible]
Volume	July '43	175	[illegible]

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York
ELSIE EAVES, Manager *SCOTT McLEOD, Statistician*
(Daily service also available—Write for details)

WATER SUPPLY

SED WORK

fornia—U. S. Eng., 74 New Montgom-, San Francisco, water supply sys., 855-1, central California.

Forest Park—Village, 517 Des Plaines, nd sewerage sys. $125,000. Seeking FWA Edwin Hancock Eng. Co., 1509 W. Jack-d., Chicago, engrs.

C., New Bern—W.W. addns., incl. in-on 23,240 ft. 4 to 16 in. watermains and lines, incl. 13,300 ft. 14 in. high-pres-ain to connect city's new well field isting 12 in. main in downtown sect., cting 300,000 gal. cap. rein.-con. reser-small pumphouses in well field, high-mp. sta., N. C. 31-178. **FWA.** Peirson itman, Raleigh, consult. engrs. CD ENR 7/29.

Pasadena — D. L. Atkinson, mayor, all, water and sewer addns., incl. facili-ains, reservoir and water well, $300,000. for FWA funds. Garrett Engineering 6 Milam St., Houston, engrs. CD 6/3—210.

Crowland—W. P. Marshall, Crowland lk., R. R. 1, Welland, constr. 6 in. ains on several sts., $27,000.

Delhi—Municipality, c/o R. P. Quance, aterworks and sewage disposal sys., gey Engineering Co., Ltd., Fort Erie,

Fonthill—Municipality, c/o A. E. Gib-lk., 6 in. watermains, R. S. Welland, Hall, engr., $20,000. CD 7/2—ENR 7/8.

Hemmingford—Municipality, c/o O. e, clk., 30,000 gal. capacity rein.-con. ir and other water sys. imprvs.,

Lauzon—Town, E. Balduc, mayor, fil-plant and sewer extensions. L. is, 105 Cote de la Montagne St., engr. 0.

Quebec City—F. X. Chouinard, munici-clk., installing waterworks services sub-n of St. Pascal Park, Limoilou Ward, 0, Ed Hamel, City Hall, engr.

ASKED

Bids Asked August 25

., Hattiesburg—City, c/o J. R. Estes, 20,000 lin. ft. 2- to 8-in. watermains, ittings, **FWA**-22-101. $50,000. Plans t $10.

Bids Asked August 30

Jersey—S. Miller, Jr., Comr., State Dpt., Trenton, cleaning water supply oir, 39,597 cu. yd. excavation, at Skill-Somerset Co. Plans deposit $10.

BIDDERS

f., San Francisco—Pub. Utilities Comm., Hall, Aug. 10. 300,000 gal. concrete tank rest Hill. Spec. 350, from B. A. How-1723 Webster St., San Francisco, 0. CD 7/31.

h., Detroit—Dpt. Water Supply, 735 lph St., Contr. D.M. 7, instl. 24 in. cast ater main, Strasburg Ave., and Contr. 6, 12 in., 16 in. mains, Eight Mile Rd., Hoover Ave., from United Constr Co., Burton St. S.E., Grand Rapids, **$141,049** 7,387 respectively.

TRACTS AWARDED

la., Mobile — 7 mi. 24 in. watermain om Bienville reservoir to downtown Mo-to Milam Constr. Co., 890 1 Ave. S., ham, **$387,000. FWA.** Bids 8/10.

lifornia—U. S. Eng., 751 S. Figueroa St., ngeles, Zone 14, water distr. facilities, 509-Eng-5306, San Bernardino Co., to net, San Bernardino, **$22,000.**

rida—U. S. Eng., 575 Riverside Ave., nville, Zone 2, water distribution and e collection sys., Neg-Jax-44-86, Char-Co., to Langston Constr. Co., Orlando, **$100,000.** Awarded 8/5.

., Great Lakes—Yards & Docks, Navy 18 St. and Constitution Ave. N.W., D. C., water supply imprvs., N.T.S., 6703, to Great Lakes Dredge & Dock 22 S. Michigan Ave., Chicago, **$212,200.**

Ankeny — Water and sewage imprvs., sewage disposal, water lines, well and house, to E. B. Spencer Constr. Co., s. **$23,041.** Bids 8/3. Nemmers & Clark, el Bldg. Des Moines, engrs.

Location of ENR Correspondents

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily
A-E-M Architect-Engineer-Management type of contract

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Named in order of Listing)

Water Supply	Unclassified
Sewers, Waste Disposal	Latin America
Bridges	Public Buildings
Streets & Roads	Commercial Buildings
Earthwork, Waterways	Industrial Buildings

Stages Reported

PROPOSED: (except Streets & Roads):

BIDS ASKED (new announcements only. For full calendar, see also preceding issues of ENR);

LOW BIDDER: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Note: To comply with censorship requirements, addresses on some reports are being generalized. Data which would reveal the purpose of the improvements and the size are withheld. The name of contractor and general area are reported.

†New Mexico—U. S. Eng., Albuquerque, two-way duct lines, utilities, Lea Co., to Parks Constr. Co., 6334 Gaston Ave., Dallas. Est. **$25,000.**

†N. C., Manteo—M. Kellogg, Jr., mayor, completion water and sanitary sewerage systems, incl. 600 ft. ¾ in. water service connections, gunite waterproofing 200,000 gal. concrete reservoir, 14,500 ft. 8 and 10 in. sanitary sewer mains, 4,000 ft. 4 in. sanitary sewer service connections, pump. sta., N.C. 31-257, to Norfolk Contracting Co., South Norfolk, Va., **$49,630. FWA.** Bids asked and awarded 8/7. CD 7/29—ENR 6/24.

Tex., Brady—City, water works imprvs., incl. drilling, casing, developing new water supply well, to Layne-Texas Co., 6931 Harrisburgh Blvd., Houston, **$15,455.** CD 6/21—ENR 6/24.

†Tex., Corpus Christi — Federal Works Agency, 702 Electric Bldg., Fort Worth waterworks pumping plant, structures, to Aikin & Hinman, P. O. Box 2350, Corpus Christi, **$162,000.** Myers & Noyes, Furman Bldg., engrs.

Ont., Islington—Etobicoke twp., 28 Dundas St., Islington, watermains, to Dundas Constr. Co. Ltd., 28 Grove St., Toronto, est. **$20,000.**

Ont., Trenton—Dpt. Natl. Defense (Air), Ottawa, addnl. watermains, R.C.A.F. station, to Keystone Contractors, Ltd., 732 Langlois Ave., Windsor, est. **$25,000.**

Que., Cap de la Madeleine—Dpt. Natl. Defence (air), Ottawa, Ont., reservoir, pump house, etc. at No. 11 E.F.T. school, to Laviolette Const. Co. Ltd., 453 Laviolette St., Three Rivers. Approx. **$15,000.**

SEWERS, WASTE DISPOSAL

PROPOSED WORK

†Conn., Southington—Twp., F. J. Hurley, supt. Sewers, Town Hall, bids soon, sewage disposal treatment plant, 10x10 ft., chlorinator units, 2,500 sq. ft. sludge beds, two 23x55 ft., d.sposal tanks, Conn. 6-214. **FWA.** H. E. Bailey, 1.7 State St., Boston, Mass., engrs. CD 8/5—ENR 7/15.

Ill., Morton Grove—City, 8-15 in. concrete or vitr. sanitary sewers, $50,000. Seeking FWA funds. Edwin Hancock Eng. Co., 1509 Jackson Blvd., Chicago, engrs.

Ill., River Grove—Bd. Supervs. Leyden Twp., sanitary sewers, approx. 150,000 ft. 8-30 in. concrete or vitr. pipe, $470,000. Seeking FWA funds. Edwin Hancock Eng. Co., 1509 Jackson Blvd., Chicago, engrs.

Me., Bath—City, H. O. Trowbridge, chn. Com., 13 Andrews Rd., incinerator. Over $25,000.

Me., Portland—City, Jas. E. Barlow, mgr., 389 Congress St., making surveys sewage disposal. Over $25,000. Metcalf & Eddy, 1300 Statler Bldg., Boston, Mass., engrs.

Mo., Clayton — St. Louis Co. Sewer Dist., c/o County Clerk, complete sewer sys., in St. Louis Co. incl. Carsonville, Curtis, Jennings, West Walnut Manor, Walton Rd., South Lackland, Melrose, Normandy, Kirkwood, Hanley-Page, St. Hohn's and Affton Districts. Applied for FWA funds. $100,000.

N. Y., New Rochelle—Dpt. P. Wks., City Hall, altering sewerage and drainage sys. and sewage disposal plant.

★**O., Akron**—H. J. Berrodin, dir. Pub. Serv., City Hall, sewage disposal plant imprvs., incinerator type disposal to burn sludge, $1,000,000. CD 8/4.

BIDS ASKED

Bids Asked August 23

†R. I., Middletown—R. C. Adams, chn. Sewer Comm., sanitary sewer main, West Main Rd., R. I. 37-148, $35,000, **FWA.** Plans deposit $25 ea. set. Jenks & Ballou, 2600 Industrial Trust Bldg., Providence, engrs. CD 6/28—ENR 7/1.

R. I., Newport—City, City Hall, bids soon, incinerator plant addn., $25,000.

Tex., Groves—Jefferson County Water Control & Imprvt. Dist. 1, (held up indefinitely) sewerage sys., Tex. 41-957. CD 4/9.

†Va., Norfolk—City, sewers, $304,000, **Va.** 44-325. **FWA.** Greeley & Hansen, Adams Bldg., engrs.

Que., Temiskaming—Canadian International Paper Co., Ltd., Sun Life Bldg., Montreal, sewers, electric lines, $40,000.

LOW BIDDERS

†Miss., Biloxi—City, Aug. 4, Div. 2, sewer imprvt. program, incl. 2 mi. 8-15 in. sanitary sewer lines and 2,700 ft. 8 in. c.i. pipe force mains, lift station, replacing pavements and sidewalks, from Jos. J. Duffy Co., 176 Adams St., Chicago, Ill. **$165,093. FWA.** CD 7/29—

CONTRACTS AWARDED

†Colorado—U. S. Eng., 909 17 St., Denver, addnl. sewage facilities, driveways, Contr. 05-016, eng-6, Pueblo Co., to Burt & Binford, Hutchinson, Kan., **$44,000.**

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, drainage facilities, Neg-Jax-44-70, Dade Co., to Owens Constr. Co., 4011 First Ave. North, Birmingham, Ala., under **$500,000.** Awarded 8/3.

†Ind., Charlestown—Federal Works Agency, 20 N. Wacker Dr., Chicago, Ill., sewage tr.

SEWERS, etc. (Contracts Awarded, Cont'd.)

plant, Ind. 12-906, to B. E. Curry Constr. Corp., 200 W. 3 St., Bloomington, for Bd. Town Trustees, Charlestown. **$34,470.** Bids 7/29, awarded 8/3. CD 6/11—ENR 6/17.

La., New Orleans—Sewerage & Water Bd., Proposal No. 4043, sub-surfacing Drainage, Music, Painters, Marigny and Spain Sts., from Lombard St. to Mirabeau Ave., to Clement Betpouey, Jr. & Co., 2701 Bruxelles St., **$24,975.** Bids 8/6.

†Texas—U. S. Eng., 25 St. and Avenue F, Galveston, addn. to drainage sys., Contr. 359-eng-5637, Hidalgo Co., to Briggs-Darby Constr. Co., Pharr, **$33,000.**

†Va., Portsmouth—2 story, brick, concrete incinerator, Va. 44-142, to Goder Incinerator Co., 407 S. Dearborn St., Chicago, Ill., **$106,897.** Bids May 16. **FWA.** CD 5/14—ENR 5/13.

†Washington—U. S. Eng., 800 3 Ave., Seattle, Zone 4, sewerage sys. Contr. 860 en-†0508, King King Co., to West Coast Constr. Co., Textile Tower, Seattle, **$50,000.** CD 8/9—ENR 8/12.

†Washington—U. S. Eng., 800 3 Ave., Seattle, Zone 4, sanitary sewerage sys., Snohomish Co., to West Coast Constr. Co., 1703 Textile Tower, Seattle, Zone 1, **$50,000-$100,000.**

Manitoba—Dpt. Natl. Defense (Army), Ottawa, Ont., sewage disposal plant at Military Centre, to H. D. Spratling, Brandon, **$37,000.**

BRIDGES

PROPOSED WORK

†California—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., temporary bridge across entrance of channel frame with retractable barges beneath approaches. **$300,000.**

Ore., Eugene—Lane County, Court House, bridge across the Willamette River to link Eugene with Eillakenzie and Coburg Dists. $400,000. R. H. Baldock, Statehouse, Salem, engr.

Wis., Sheboygan—Repairing bridge fdns., 45 ft. concrete sheet piles, protection wharf, new fdn. either, concrete piers on piles or concrete filled caissons, constructing anchorage on east end of bridge, etc. $25,000.

Alta., Wetaskiwin—Provincial Govt., Edmonton, replacing necessary bridges, $100,000. Dpt. Hys., Edmonton, engrs.

Que., Quebec City—F. X. Chouinard, city clk., 600 ft. concrete viaduct under Canadian Natl. R.R., De La Canard St. to 1 Ave., $150,000. E. Hamel, City Hall, in association with M. Champlain, Canadian Natl. R.R., Quebec City, engrs.

BIDS ASKED

Bids Asked August 24

Maryland—State Rd. Comm., Baltimore, concrete and timber bridge over branch of Charles Branch between Upper Marlboro and T. B. Bridge, concrete slab span on timber piles abutments, etc., Prince George Co. Contr. P-509-1-511. Plans deposit $5, not refunded.

Bids Asked September 2

California—State Div. Hys., G. T. McCoy, state hy. engr., Pub. Wks. Bldg., Sacramento, repair 33 timber bridges at points between Indo and Blythe, X1-Riv-64-C,C, Riverside Co.

Bids Asked September 7

★**Pa., Pittsburgh** — Bd. Comrs. Allegheny Co., R. G. Woodside, controller, Court House, McKnight Rd., Sect. 4, paving and bridge at Babcock Blvd. Interchange, Ross Twp. $1 500,000. Plans deposit $12. Levi burd Duff, County Bldg., engr.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, bridges on FAP-150-A(4), Tuscaloosa Co., from B. B. Etheridge, Gantt, **$200,647.**

Indiana—State Hy. Comm., S. H. Hadden, chmn., State House Annex, Indianapolis, reconstructing arch, 1 span 25 ft. long over dredged ditch Bartholomew Co.; from R. I. Schutt, 214 E. New York St., Indianapolis, **$28,032**, est. $32,204. Rejected bids reconstructing arch 1 span 20 ft. long over Pursley Creek, Blackford Co. CD 7/30—ENR 8/5.

Tex., Langtry—Southern Pacific Lines, R. W. Barnes, ch. engr., 916 Southern Pacific Bldg., Houston, grading bridge over Pecos River for T & N. O. Ry., from Brown & Root, P. O. Box 3, Houston and P. O. Box 1139, Austin, **$286,000.** CD 7/13—ENR 7/15.

CONTRACTS AWARDED

★**Calif., Needles**—The Atchison, Topeka & Santa Fe Ry. System, G. W. Harris, ch. engr., 80 E. Jackson Bldg., Chicago, Ill., bridge superstructure over Colorado River to American Bridge Co., Frick Bldg., Pittsburgh, Pa., est. over **$500,000.**

Missouri—State Hy. Comn., Jefferson City, one 120 ft., one 80 ft., one 75 ft. and one 60 ft. steel truss spans, five 40 ft. I-beam spans, steel pile bents to rock, Montgomery Co., to L. V. Hites Co., City Bank Bldg., Kansas City, **$73,300.** CD 7/14—ENR 7/22.

Que., Ste. Therese—Province of Quebec, Quebec City, rein.-con. bridge constr. and approaches, to M. Chauvier, Notre Dame St., Grande Riviere Est. **$25,000.** CD 7/20.

STREETS AND ROADS

PROPOSED WORK

★**†Arizona**—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, roads at military installation, Coconino Co., $1,000,000.

BIDS ASKED

Bids Asked August 24

Indiana—State Hy. Dpt., S. G. Hadden, chmn., State House Annex, Indianapolis, soil erosion control 1.610 mi. along U. S. Rd. N. E. from Hardisburgh, Dearborn Co., concrete paving and compacted aggregate surfacing 0.251 mi., Howard Co.; concrete paving 0.160 mi., Madison Co.; 0.385 mi., Madison Co. Plans deposit $1.75 for each above; 1.805 mi., Marion Co. Plans deposit $2.75.

Iowa—State Hy. Comn., Ames, paving 1,783 cu. yd. P-136, Fremont Co.; bituminous surfacing 3.05 mi. County Trunk Rd. "W", FSN-416-A(1), Muscatine Co.; maintenance resurfacing 2.7 mi. Iowa 54 from Marble Rock to Iowa 14, 8 mi. Iowa 14 from 2 mi. south of Iowa 54 to 6 mi. north of Iowa 54; 9.5 mi. Iowa 147 from U.S. 18 to Iowa 14, M-2220, Floyd Co.; 6.7 mi. Iowa 31 from Correctionville to Cherokee Co., M-3287, Ida and Woodbury Counties; 2.3 mi. Iowa 177 from Mitchell to Iowa 9, 5.6 mi. Iowa 312 from McIntire to Iowa 9, 6.3 mi. Iowa 105 from St. Ansgar to Worth Co., stockpiles on Iowa 312 and Iowa 105, M-2221, Mitchell Co.; 32.6 mi. Iowa 140 from Climbing Hill to Iowa 5, 7.6 mi. Iowa 243 from Pierson to Iowa 140, M-3288, Plymouth and Woodbury Counties; 4.3 mi. Iowa 379 from Joice to Iowa 105, 24.6 mi. Iowa 105 from Lake Mills to Mithcell Co., stockpiles on Iowa 105, M-2222, Worth Co.; maintenance paving reconstruction 1,576 sq. yd. on U.S. 6, Iowa 14 and 163, M-1269, Jasper Co.; 325 sq. yd. on U.S. 6 east of Des Moines, on Iowa 60 northwest and southwest of Des Moines, on U.S. 69 north of Des Moines, M-1270, Polk Co.; maintenance bridge repairs, building retaining wall and placing rip rap at south abutment of Elk Creek bridge, Iowa 118, M-1267, Hardin Co.; rip-rap constr. 500 sq. yd., DA-WI-3(N-3), Polk Co.

Maryland—State Road Comm., Baltimore, grading, drainage, concrete surfacing Aiken-Port Deposit Rd., Contr. CE 252-2-266, Cecil Co. Plans deposit $5, not refunded.

Bids Asked August 30

New Jersey—S. Miller, Jr., Comn., State Hy. Comm., Trenton, constructing 0.165 mi. Pemberton-Fort Dix Access Road, intersection at Emmon's Corner, FP DA-WR-9, Burlington Co. Plans deposit $10.

Bids Asked August 31

★**Ohio**—State Hy. Dpt., Columbus, asphaltic concrete repaving 1.492 mi. Sect. Bryan SH 309 and 310 US 6, $37,200; 5.326 mi. Sect. C and Alvordton SH 21, US 20, $96,000, both Williams Co.; 2.32 mi. Sect. Moreland Hills and Chagrin Falls, SH 35, US 422, $34,430; 3.247 mi. Sect. North Olmstead, SH 694, $166,940, both Cuyahoga Co.; 1.39 mi. Sect. Toledo and Rossford, SH 53, US 23 and 68, Lucas and Wood Counties, $23,400; 0.361 mi. Sect. Caldwell SH 353, US 21, Noble Co., $7,430; 2.319 mi. Wellsville SH 7, Columbiana Co., $33,460; 3.003 mi. Sect. A, Upper Arlington and K of SH 48 and 910, US 33, Franklin Co., $62,900; 4.857 mi. Sects. M and N SH 41, Hamilton Co., $48,400; 1.553 mi. Sect. Wadsworth SH 97, US 224, Medina Co., $29,600; 4.131 mi. Sect. C, E, D SH 210, US 127, Preble Co., $43,150; 1.713 mi. Sect. Portsmouth SH 7, US 52, Scioto Co., $25,500; 1.522 mi. Sect. A and Conneaut SH 13, Ashtabula Co., $20,800; rock asphalt resurfacing 0.895 mi. Sect. Findlay of SH 22, US 25, Hancock Co., $8,180; grading, asphaltic concrete paving 0.332 mi. Sect. Kent SH 94, Portage Co., $15,040; bituminous treatment 17.68 mi. Sects. A and B, SH 896, Butler Co., and Sect. A-2 and B and C of SH 603, Clermont Co., $47,678; grading, concrete widening, roadside imprv. 1.181 mi. Sect. Wellston SH 396, Jackson Co., $37,000; grading, concrete paving 0.946 mi. Sects. G and MT. Sterling SH 50 and US 62, Madison Co., $93,270; 0.844 mi. Kelly Ave. in Akron, Summit Co., $84,300.

Bids Asked September 2

California—State Div. Hys., G. T. McCoy, ch. engr., Pub. Wks. Bldg., Sacramento, road mix surfacing approx. 15 mi. X1-Riv-64-1, B, C and D, Riverside Co.; grading and plant mix surfacing .7 mi. East Bway., between Crenshaw Blvd. and Doty Ave., V11-LA, Los Angeles Co.; placing crusher run base and plant mix surfacing 1 mi. near Danville, 1V-C.C-107-A, Contra Costa Co.

Bids Asked September 3

Tennessee—State Hy Dpt., Nashville, grading, draining, surfacing, 3.253 mi., incl. bridge, Millington-Arlington Rd., Proj. No. DA-NR-1(1), Shelby Co.

Bids Asked

California—State D... Hys., G. T. M... engr., Pub. Wks. Bldg., Sacramento, bids, plant mix ma... repairing ... Tehama Co. CD 8/3—ENR 8/5, under ...

Iowa—State Hy. Com... Ames, rejected imprv. 16.6 mi., Plym... pello Co.; 1.54 mi., ... M-1264, Polk Co., ... CD 8/2—ENR 8/5.

Maryland—State Rd. Comm., Baltimore, jected bids, scarifyin... draining, ma... surfacing 0.8 mi. Cre... town Keyser Rd. Kelly Ordnance Depot, ... Allegheny Co. 8/4—ENR 8/12, under ...

†Massachusetts—U. S. Eng., 31 St. J... Ave., Boston, grad... 19-020-44 No. Barnstable Co., $50,000-$100,000. Ex... date. CD 8/5.

LOW BIDDERS

Alabama—State Hy. Dpt., Montgomery, grading, draining, gravel surfacing 13.95 mi. FAP-150-A(4), Tuscaloosa Co., from R. B. Smith Constr. Co., 215 Atlantic Ave., Atlanta, Ga., **$192,113.** CD 7/8—ENR 7/15.

California—State Div. Hys., Sacramento, Aug. 11, imprv. 6.1 mi. and 2.1 mi. Merced Co., from Phoenix Constr. Co., P. O. Box ..., Porterville, Bakersfield, **$61,131***2.8** mi. Manteca, from Heafey-Moore Co., 344 High St., Oakland, **$121,940***2.9** mi. Contra Costa Co., from Claude C. Wood, P. O. Box 349, Antioch, **$48,053.** CD 7/22—ENR 7/29***2.7 mi. San Luis Obispo Co., from Granite Construction Co., P. O. Box 900, Watsonville, **$29,460***3.5** mi. Sutter Co., from Hemstreet & Bell, 12 F Sts., Marysville, **$33,525.** CD 7/30.

Calif., Glendale—City, August 5, 36,000 yd. bituminous macadam wearing surface, from Larson & McCarthy, 862 Garfield Ave., So. Pasadena, **$29,184.** J. C. Albers, Hall, engr.

Florida—State Rd. Dpt., Tallahassee, Aug. 3, paving 4.45 mi. Broward Co., from Archer Oil Co., 1217 Biscayne Blvd., Miami, **$134,159.** CD 7/19—ENR 7/22.

Kentucky—Dpt. Hys., Frankfort, Aug. 3, imprv. 1.183 mi. Catlettsburg-Louisa Rd., 2 mi. Pt. 3 same road, both Boyd Co., to Middle States Bituminous Corp., Ironton, **$31,514** and **$56,204** respectively***4.661 mi. Carter Co., from Nally & Mudd, Bardstown, **$92,678***3.139** mi. Henry Co., from H. Williams, 1326 S. 7 St., Louisville, **$40,1...** 0.728 mi. Webster Co., from Foster & Creighton Co., 704 Amer. Bank Bldg., Nashville, Tenn., **$106,061.** CD 7/27.

†New Jersey—State Hy. Dpt., State House Annex, Trenton, imprvs. roads, Monmouth Co., from R. W. Cleveland, 72 No. Park St., East Orange, **$118,675.** CD 7/30—ENR 8/...

Texas—State Hy. Comm., Austin, Aug. 3, imprv. 1.464 mi. Cameron Co., from H. Zachry, Laredo, **$74,202**, est. $80,000***... mi. Hartley and Dallam Counties, also 12 mi. Lamar Co., from McKinney Constr. Co., Marshall, **$158,935** and **$38,961** respectively, est. $180,000 and $40,000 respectively***... mi. Red River Co., from R. C. Buckner, P. O. Box 609, Jacksonville, **$42,424**, est. $40,... 11.631 mi. Brazoria Co., from Cage Bros., H. E. Williams, Bishop, **$290,262**, est. $2... CD 7/30 and 8/2.

†Virginia—Pub. Bldgs. Admin., 18 and Sts. N.W., Wash., 25, D. C., Aug. 5, concrete pavements at Federal Office Bldg., Gravelly Point, from Arlington Asphalt, Arlington, **$27,865.** FWA. CD 7/30.

†Washington—Pub. Roads Admin., Post Office Bldg., Portland, Ore., constr. Striped Peak access road, Clallam Co., Sound Constr. & Eng. Co., and Peter Kiewit & Sons, Northern Life Tower, Seattle, 1, **$258,725.**

Wash., Seattle—Bd. Pub. Wks., City Bldg., Seattle, Zone 4, August 5, ... ing Second Ave., Pike St. to Yesler, King Co., from Agrentieri & Colarusso, Weller St., Seattle, Zone 44, **$53,207.** $53,987. CD 7/28.

CONTRACTS AWARDED

Ark., Hope—City, A. Graves, Mayor, ... crete paving, storm and sanitary sewers, Ben Sira Co., 3901 Elm St., Dallas, Tex., **662.** C. O. Thomas, engr.

California—State Div. Hys., Sacramento, imprv. 8.9 mi. Solano and Napa Counties, to J. A. Cassen & N. M. Ball & Sons, P. O. Box 404, Berkeley, **$641,894**; 3.2 mi. Mendocino Co., to Ted Watkins, c/o Post Office, Linden, **$32,763.** CD 8/10—ENR 8/12, under LB.

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, paving addn. taxiways and roads, Neg-Jax-44-23, Clay Co., to H. Craggs Constr. Co., Ocala, under $5... Awarded 8/7.

†Florida—U. S. Eng., 675 Riverside Ave., Jacksonville, Zone 2, roads, other facilities, Collier Co., to Atlantic Bitulithic Co., Miami. Bldg., Wash., D. C., under $50,000. Awarded 7/7.

Idaho—J. D. Wood, acting comr. P. W., Boise, imprv. 0.774 mi. and 1.415 mi. Sheet...

...TS, etc. (Contracts Awarded, Cont'd.)
...tenai Counties, to M. J. Kuney Co., Ralph St., Spokane, Wash., **$25,837.** 2,223. Bids 8/6. CD 7/28.

...—State Hy. Dpt., Topeka, imprv. Reno Co., to J. H. Shears' Sons, son, **$27,436.** Rejected bids, stabilizgle asphalt surfacing 4 mi., DANR-6, R. C. Keeling, state hy. engr. Bids 2.

...—State Hy. Dpt., Wichita, imprv. mi. Proj. K5083, Sedgwick Co., to Constr. Co., 217 N. 45 St., Omaha, Bids 8/6, awarded 8/11. CD 7/27.

...land—State Rd. Comn., Baltimore, ... mulching 7.492 mi. hy. along ...ville Mechanicsville Rd., Charles and ...y's Counties, to Woodbine Nurseries, ...hwood Dr., Baltimore, **$28,500.**

...gan—State Hy. Dpt., Lansing, grade ...on carrying Schaefer Hy. over Detroit ...al Expressway, incl. 335 ft. rein.-con. ...e, road, excav., concrete paving dual ... to L. A. Davidson, 213 E. St. Joseph ...nsing, **$315,472.** CD 8/3—ENR 8/5.

... **Wayne**—52,000 lin. ft. concrete side... to Wier Construction Co., 305 Lincoln Detroit. Est. **$39,500.** Brender & Van ...am, 35449 Annapolis St., engrs.

... **Mexico**—F. M. Limbaugh, State Hy. Santa Fe., grading, minor drainage ...es, etc., 5.254 mi., Eddy Co., to F. D. ...arger, 200 E. Central Ave., Albuquer... **$94,108.** Bids Aug. 10. CD 8/3.

... **Mexico**—State Hy. Comn., Santa Fe, ... minor drainage structures, one two ...concrete, steel bridge, ballast and base ...surfacing 6.3 mi. Santa Fe and Sando... ...unties, to Lowdermilk Bros., 140 S. ... St., Denver, Colo., **$367,732.** Est. ... Awarded 8/14. Tentative award. 10.

... **York**—U. S. Eng., 120 Wall St., New ...Zone 5, topsoiling and spreading, Contr. ...Eng-21, Orange Co., to H. E. Millis ...Corp., Amenia, **$244,000.**

...de Island—Providence Housing Auth., ...bosset St., Providence, surfacing housing ...RI 1-2, for NHA, to Narragansett Im...ent Co., 104 Public St., Providence, ...

...IL, **Prudence Island**—Yards & Docks, ...Dpt., 18 St. and Constitution Ave. N.W., ...D. C., road imprvs., Naval Magazine, ...852, to N. A. Gammino Constr. Co., ...ley St., Providence, R. I., **$141,500.**

...as—U. S. Eng., 231 W. Main St., Deni... ...sphalt and concrete paving, Hunt Co., ...g Constr. Co., 817 Bourbon St., Dallas, ...0.

...shington—U. S. Eng., 800 3 Ave., Seattle, ... walks, Pierce Co., to Mortensen Constr. ...21 Westlake Ave. N., Seattle, Zone 9, **$50,000.**

...hington—State Hy. Dpt., Olympia, ... 1 mi., Spokane Co., to C. A. Power, ...8th, Spokane, **$91,233***1.9** mi. Pacific ... Joslin & McAllister, N. 303 Haven, ...e, **$155,858.** B. Bantz, state hy. dir. ...28.

...shington—U. S. Eng., 800 3 Ave., ...A, Zone 4, road relocation, Thurston ...G. M. Grisdale, P. O. Box 509, Shelton, **$50,000.**

... **Milwaukee**—J. P. Schwada, city engr., ...tic paving, N. Richard St., to W. F. ...2808 N. Sherman Blvd., **$33,056;** W. 16 ... White Consolidated, Inc., 2543 W. ... St., **$25,809.** BA 8/9. CD 8/3.

...ming—State Hy. Comm., J. G. Smith, ...Cheyenne, imprv. 18.781 mi., S.P. 2157 ...69, Carbon Co., to H. W. Read, 706 W. ...Cheyenne, **$90,145.** Bids 8/10, awarded ...CD 8/3.

... **Terrace**—Dpt. Transport, Ottawa, ...gravelling, bituminous surfacing access ...connecting Terrace Airport, to Carter... ...ldinger Co., Ltd., Royal Bank Bldg., ...peg, Man., about **$170,000.**

... **Nelson**—Dpt. Pub. Wks., Fredericton, ...ing, turnpiking 6.5 mi. Rogersville Rd. ...ter Constr. Co., Ltd., 50 George St., ...le (St. John), **$35,000.** July 27. CD ...ENR 7/22.

... **Camp Borden**—Dpt. Natl. Defense ... Ottawa, resurfacing of taxi strips at ... School, No. 1, to Breman Paving Co., ...409 Gage Ave., N., Hamilton. Est. ...

... **Fort William**—City, paving Neebing ...from Arthur St. to Montreal St., to ... Bituminous Paving Co., Ltd., 1454 ...St. W., Toronto, **$25,900.** H. M. Wood... ...c/o City, acting engr.

... **Wallaceburg** — Municipality, paving, ...onehouse Co., Ltd., Main St., Petrolia, **$5,000.** G. H. Bowen, Town Hall, engrs.

...ec—Province of Quebec, Quebec City, ... concrete pavement, 12 mi. in St. ... and 11 mi. in St. Nicolas, to H. J. ...ell, Ltd., Canada Cement Bldg., Mon... **$162,492, $174,491** respectively. E. ...Dpt. Rds., Quebec City, engr.

... **Drummondville**—Municipality, asphalt ... and cement sidewalks, day labor. ... O. Bessette, City Hall, engr.

Que., Lauzon—Province of Quebec, Quebec City, gravelling and paving 2.5 mi., to Union Quarries & Paving Co., Ltd., 48 Second Ave., Quebec City, **$39,055.** E. Gobier, Dpt. of Rds., Quebec City, engr.

EARTHWORK, WATERWAYS

PROPOSED WORK

Ill., Belleville — City clerk, dredging, straightening about mile Richland Creek between W. Main and 6 Sts. to 2 and F Sts. $25,000.

Louisiana—State Dpt. Finance, Div. Purchases, Baton Rouge, received no bids, levee repairs on Buras to Fort Jackson (Back to Protection Levee) approx. 91,455 cu. yd. earthwork, Plaquemine Parish Dpt. Pub. Wks., Capital Bldg., Baton Rouge, engrs. CD 8/2 under BA.

O., Cleveland—City, S. D. David, dir. Pub. Service, City Hall, stone breakwater along Lake Erie to prevent soil erosion. S. M. Wood, Lake Bluff, Ill., engr.

O., Zanesville—Dpt. Water, dredging 23,700 cu. yd. material from along left bank of Muskingum River, near here, and placing material along right bank of river. Over $15,000.

★**†Wash., Yakima**—Dpt. Interior, Interior Bldg., 19 and C Sts. N.W., D. C., constructing 2 laterals on Roza irrigation project to carry water sufficient to irrigate 5,400 and 12,000 acres of land respectively; 26 mi. main canal between wasteways Nos. 5 and 6 and for another canal. $865,000.

W. Va., Parkersburg—Parkersburg Iron & Steel Co., dredging 5,000 cu. yd. along left bank of Ohio River at foot of Neal Island, imprvs. to loading and unloading trestle, etc., over $15,000.

Que., Valleyfield—Montreal Cottons Ltd., 710 Victoria Square, Montreal, retaining wall. $30,000.

LOW BIDDERS

†Arizona—U. S. Eng., 751 S. Figueroa St., Los Angeles, Zone 14, August 5, channel imprvs., roads, No. 131, from Morrison-Knudsen Co., 411 W. 5 St., Los Angeles, under **$200,000.**

†Arkansas—U. S. Eng., U. S. Post Office & Courthouse, Vicksburg, Miss., July 29, approx. 1,472,000 cu. yd. earthwork, west bank of Mississippi River, Sol. 1106-44-5, Chicot Co., from Sternberg Dredging Co., Arcade Bldg., St. Louis, Mo., **25c.** per cu. yd. CD 7/21—ENR 7/23.

La., New Orleans—City, Purch. Div., City Hall, sub surface drainage, No. 4043, from Clement Bepouey Jr., 2701 Bruxelles St., New Orleans, **$24,975.**

CONTRACTS AWARDED

†Alabama—U. S. Eng., Grant St. W. of Westwood St., Mobile, flood control facilities, Inv. 569-44-27, Macon Co., to Royce Kershaw Co., Montgomery, est. **$40,000.** CD 8/3—ENR 8/5.

†Arkansas—U. S. Eng., 300 Bway., Little Rock, repair Tucker Lake levee, Jefferson Co., to R. T. Henry, Duback, La., **$20,000.** Awarded 8/6.

†Arkansas—U. S. Eng., West Memphis, 440,000 cu. yd. earthwork, 40-041-44-10, Lee Co., to Moss & Thornton, Trenton, Ky., approx. **$100,000.**

†Arkansas—U. S. Eng., 300 Bway., Little Rock, repairing Carden Bottom Levee also Dardanelle Levee Dist., Yell Co., to Clarke Bauxite Co., 410 W. 26 St., Little Rock. **$30,000** and **$50,000** respectively. Awarded 8/6.

†California—Bureau of Reclamation, Old Post Office Bldg., Sacramento, earthwork and structures, Station 452 plus 00 to Station 1050 plus 75, Madera Canal, Friant Div., Central Valley Proj., Spec. 1054, Fresno Co., Schedule 1, to Larsen Bros. & Harms Bros., Rte. 4, Box 2220, Sacramento, **$488,689;** Schedule 2 to Oberg Bros., 612 E. 80 St., Los Angeles, **$135,371.** CD 7/26—ENR 7/29.

†California—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., shore protection, NOY 6417, to Dennis Constr. Co., Box F, Hillcrest Station, San Diego, **$34,400.**

†Illinois—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis, 2, Mo., rebuilding levees, 275,000 cu. yd. excav., Neg. 23-065-44-16, Greene Co., to Chernus Constr. Co., 710 North 12 Blvd., St. Louis, 3, Mo., **$50,000-$100,000.**

†Illinois—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis 2, Mo., placing approx. 16,000 cu. yd. earth, rebuilding levees, Neg. 1103-44-10, Scott Co., to Luhr Bros. Excavating Co., Columbia, under **$50,000.** Bids 7/27.

Mont., Billings—Shepherd Drainage Dist., drainage sys. for 7,000 acres of land, to Megarry Bros., St. Cloud, Minn., **$86,622.** R. C. Lillis, Billings, engr. CD 6/17—ENR 7/24.

†Oklahoma—U. S. Eng., 231 W. Main St., Denison, Tex., dykes for flood protection from Wachita and Rusk Creek Rivers, Garvin Co. to Midland Constr. Co., Braniff Bldg., Oklahoma City, **$20,125.**

Ont., Toronto—Province of Ontario, Toronto, stone breakwater in Jordan Harbour, to Bawtinheimer Ltd., 602 Erie St., Niagara Falls. Bids 7/13. CD 7/7.

UNCLASSIFIED

PROPOSED WORK

†California—FACILITIES, etc.—U. S. Eng., 74 New Montgomery St., San Francisco., sanitary facilities, bldg., Job Nos. 1004, 1012 and 1018, central California.

California—HANGAR—Douglas Aircraft Co., 3000 Ocean Park Blvd., Santa Monica, plans by Taylor and Taylor, engrs. and archts., 800 W. 3 St., Los Angeles. 240x650 ft., structural steel frame hangar. Over $40,000.

†California—RIFLE RANGE—U. S. Eng., 74 New Montgomery St., San Francisco, rifle range, Job No. 1041, central California.

Calif., Los Angeles—PIPELINES—Dpt. Water & Power, 207 So. Bway., Zone 12, two 8 in. rein-con pipe lines, new intake works, A. H. VanNorman, 207 So. Bway., Zone 12, engr., $380,000.

★**†Fla., Pensacola**—CONSTRUCTION—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave., N.W., Wash., D. C., construction, all Santa Rosa Co., $1,462,500.

Ill., Springfield—AIRPORT—Springfield Airport Auth., airport. $350,000.

Louisiana — ELECTRIC TRANSMISSION LINE—Louisiana Power & Light Co., West Monroe, overhead electric transmission line across Red River, near Natchitoches.

Louisiana—PIPELINES—The Superior Oil Co., Oil & Gas Bldg., Houston, Tex., two 3½ in. and three 2⅜ in. pipelines across Turtle Bayou, Terrebone Parish.

La., Erath—OIL WELL TESTS—Texas Co., Texas Bldg., Houston, Tex., drilling, casing, developing 4 new 11,600 ft. oil well tests, near here. Est. over $25,000.

La., Estherwood—OIL WELL—Continental Oil Co. and Sun Oil Co., Eagle Ford Bldg., Dallas, Tex., developing 12,000 ft. test oil well, Sec. 54-los-lw, near here.

La., St. Francisville—GAS MAIN, etc.—Mayor and Bd. Aldermen, St. Francisville, $25,000 bond election Sept. 7, constructing or constructing and purchasing natural gas main pipeline, pipeline mains, laterals and service pipes, gas distr. sys., incl. regulator stations, meters and regulators, etc.

Mo., Columbia — IMPROVEMENTS — City, imprvs., $35,000.

★**†Ohio**—IMPROVEMENTS—Goodyear Aircraft Corp., Airport, Akron, soon lets contract, imprvs. Total est. $3,000,000. Defense Plant Corp. will finance. J. Gordon Turnbull, 2630 Chester Ave., Cleveland, archt. CD 6/17—ENR 6/24.

Ore., Eugene — PARKING FACILITIES — City, City Hall, block clearance program to provide parking facilities between Sixth and Seventh Aves. C. M. Calkins, City Hall, engr.

Pennsylvania—NATURAL GAS DEVELOPMENT—Slater White, et al., Waynesburg, development deep sand natural gas producing area incl. drilling unspecified number new wells, installing connecting and gathering pipelines, etc., in Jackson Twp., near Bluff, $40,000. J. G. Devine, Waynesburg, engr.

Pa., Greensboro—NATURAL GAS DEVELOPMENT—C. Hart & J. Gray, Wind Ridge, development natural gas area, incl. drilling unspecified number deep wells, installing connecting and gathering pipelines, booster stations, etc. $40,000.

R. I., Newport—COMFORT STATIONS—City, Pub. Wks. Dpt., City Hall, 2 comfort stations, Washington Sq. and King Park Sects. $25,000.

Texas—OIL WELL—Fain & McGaha Oil Co., Abilene, drilling, developing new offset oil well, Jones Co.

Texas—OIL WELL—W. L. Goldston, et al, Roma, drilling, developing deep test oil well, Starr Co.

Texas—OIL WELL—Humble Oil & Refining Co., Humble Bldg., Houston, drilling, developing deep test oil well test, Polk Co.

Texas—OIL WELL—Humble Oil & Refining Co., Humble Bldg., Houston, drilling, developing new 6,000 ft. oil well test, Goliard Co.

Texas—OIL WELL—Jno, Mayo, Houston, drilling, casing, developing 2 new 8,500 ft. oil well tests.

Texas—OIL WELL—Stanolind Oil & Gas Co., Fair Bldg., Fort Worth, oil well drilling, 4600 acre tract, along Harris and Walker Co. lines. Over $25,000.

UNCLASSIFIED (Proposed Work, Cont'd.)

Texas—OIL WELL—Texas Co., Texas Bldg., 1700 San Jacinto St., Houston, drilling, developing 6,500 ft. oil well test, Jackson Co.

Tex., Alba—OIL WELL—Shell Oil Co., Deere Pare, Houston, drilling, casing, developing deep test oil well, Wood Co.

Tex., Algoa—OIL WELL—Jack Frazier & Assoc., Houston, drilling, casing, developing new 9,500 ft. oil well.

Tex., Anson—OIL WELL—Watchorn Oil & Gas Co., Colcord Bldg., Oklahoma City, Okla., drilling, developing 3,000 ft. oil well test.

Tex., Beckville—OIL WELL—Rogers Lacy, Longview, drilling, casing, developing new 6,509 ft., oil well test, Panola Co.

Tex., Benavides—OIL WELL—Sun Oil Co., First National Bank Bldg., Dallas, drilling new deep test oil well.

Tex., Bledsoe—OIL WELLS—Continental Oil Co., Eagle Ford Bldg., Dallas, drilling, developing, 3 new oil wells. Over $25,000.

Tex., Cayuga Field — Rosser-Pendleton, Palestine, developing deep test oil well, Anderson Co.

Tex., Church Point—OIL WELL—Union Sulphur Oil Co., Lake Charles, drilling deep test oil well.

Tex., Clarksville—OIL WELL—C. Hocker & Associates, Clarksville, drilling, casing, developing new deep test oil well.

Tex., Columbus—OIL WELL—Cities Service, J. Frazier & J. Mayo, Esperson Bldg., Houston, developing 8,500 ft. oil well.

Tex., Cordele—OIL WELL—Woody B. Craig & Associates, Corpus Christi, drilling, casing, developing deep test oil well.

Tex., Crockett—OIL WELL—Glassell & Glassell, Crockett, drilling, casing, developing, 5,000 ft. oil well test.

Tex., Davis Hill—OIL WELL—W. W. West, Esperson Bldg., Houston, drilling, casing, developing new 10,000 ft. oil well.

Tex., D'Hanis—OIL WELL—Galtex Oil Co., drilling, casing, developing 3,620 ft., oil well test, Land Survey 1012, Medina Co.

Tex., Dilworth—OIL WELL—Texon Royalty Co., and Auto Ordnance, Alamo Nation Bldg., San Antonio, drilling, casing, developing another 6,400 ft. oil well test, Gonzales Co.

Tex., Ebanos—PIPE LINES—McBride Refining Co., c/o H. L. McBride, Edinburg, gathering pipe line sys. Over $25,000.

Tex., Edinburg — OIL WELL — Arkansas Fuel Oil Co., Esperson Bldg., Houston, drilling, developing deep test oil well, Hidalgo Co.

Tex., Ellasville — OIL WELL — Anderson Prichard, Ellasville, drilling, casing, developing new 5,000 ft. oil well.

Tex., Fairbanks—WELL—Permac Oil & Gas Co., Marshall, drilling, developing deep test oil well.

†**Tex., Fairfield**—OIL WELL—Carter Gragg & Assoc., Fair Bldg., Fort Worth, drilling, casing, developing deep test oil well, Freestone Co.

Tex., Fruitland—OIL WELL—C. E. Rodgers & associates, Montague, drilling, developing new deep test oil well.

★**Tex., Galveston** and **Port Bolivar**—TUNNEL—Galveston Co., et al, c/o Judge, Courthouse, Galveston, revised plans, rein.-con. tunnel and causeway, to run across Bolivar Rds., total length 1 4/5 mi. overall, with tunnel proper being 5,342 ft. Est. $6,000,000. Application filed with U. S. Engineer it is planned to finance by toll charges and Federal funds may be sought. Palmer & Baker, Inc., c/o Courthouse, Galveston, engrs. CD 4/30—ENR 5/6, under Earthworks, etc.

Tex., Giddings—OIL WELL—W. H. Bode, 2013 Clower, San Antonio, drilling, 7 in. casing, developing new 2,500 ft. oil well, Lee Co.

Tex., Graham—OIL WELL—A. G. Bender, Graham, drilling, developing new 4500 ft. oil well test, Sect. 2670, TE&L Blk. 6. L. P. Everett, survey.

Tex., Grand Falls—OIL WELL—Rio Bravo Oil Co., 913 Franklin St., Houston, drilling, developing 2,500 ft. rotary type oil well. $25,000.

Tex., Grapeland—OIL WELL—Lone Star Production Co., drilling, developing new deep test oil well.

Tex., Green—OIL WELL—Blanco & Buchanan, Milan Bldg., San Antonio, drilling, developing new 6,250 ft. oil well test.

Tex., Hawley—OIL WELL—H. G. Neely, Fort Worth National Bank Bldg., Fort Worth, drilling, casing, developing deep test oil well.

Tex., Holliday—OIL WELL—G. E. Kadane & Sons, Archer City, drilling, casing, developing 5,000 ft. oil well.

†**Tex., Homer**—OIL WELL—J. R. Meeker, Castleberry Rd., Fort Worth, drilling, casing, developing deep test oil well.

Tex., Howard—OIL WELL—Magnolia Petroleum Co., Esperson Bldg., Houston, drilling, casing, developing 3,000 ft. oil well, Mitchell Co.

Tex., Inez—OIL WELL—Paul J. Fly, et al, Petroleum Bldg., Houston, developing oil well test.

Tex., Jacksboro—OIL WELL—Standard Oil Co. of Texas, and Hanlon-Buchanan, Inc., Petroleum Bldg., Houston, drilling, developing 6,000 ft. oil well test.

Tex., Jefferson—OIL WELL—Gulf Oil Co., Gulf Bldg., Houston, drilling 12,000 ft. oil well, Marion Co.

Tex., Katy—OIL WELL—Jno. B. Hawley & Associates, 407 Capps Bldg., Fort Worth, drilling, casing, developing 7,600 ft. oil well.

Tex., Keller—OIL WELL—J. Martin & Assoc., Flatiron Bldg., Fort Worth, drilling, casing, developing new 7,300 ft. test oil well.

Tex., Lagrange—OIL WELLS—E. V. Abernathy & Assoc., New Brawnfels, drilling, developing 1 or more deep test oil wells.

Tex., LaWard—OIL WELL—Stewarts, Inc., et al, Edna, drilling, casing, developing new deep test oil well.

Tex., Levelland—OIL WELL—Honolula Oil Corp., Lubbock, drilling, developing new 5,075 ft., cable and rotary type oil well test, Hoskley Co.

Tex., Levelland — OIL WELLS — Trinity Drilling Co., Lubbock, drilling developing 3 deep test oil wells.

Tex., Lockhart—OIL WELL—Lockhart Oil Co., and D. Davenport, Luling and Lockhart, drilling, casing, developing new 4,200 ft. oil well test.

Tex., McAllen—PIPELINES—Radio Refining Co., 75 mi. or more gathering pipelines radiating from 5 oil field and connecting with Conoco Main Line Carrier, $150,000.

Tex., McAllen—PIPELINE—Radio Refining Co., c/o C. J. Holland, pres., 6 in. 5 mi. crude oil pipeline carrier, between refinery and Continental Pipe Line Main. Hidalgo Co. $50,000.

Tex., Mathis—OIL WELL—Republic Natural Gas Co., 1505 Federal, Houston, drilling, casing, developing new 6,300 ft. oil well test.

Tex., Maud — OIL WELL — Permec Oil & Gas Co., New Boston, drilling, developing deep test oil well. $25,000.

Tex., Mildred—OIL WELL—Byrd-Frost No. 1, Corsicana, drilling, developing new deep test oil well.

Tex., Mildred—OIL WELL—Girard Corp., Corsicana, drilling, casing, developing deep test oil well.

Tex., Mt. Lucas Field—OIL WELL—Smith & Storey, Milam Bldg., San Antonio, drilling, developing new 4,500 ft. oil well test, Live Oak Co.

Tex., Nederland—IMPROVEMENTS—Jefferson Co., c/o W. W. Kent, Judge, Beaumont, bids soon imprv., bldgs. $300,000. Wignall & Neff, Port Arthur, and H. Woodside, Beaumont, archts.

Tex., Needville—OIL WELL—J. K. Dorrance, W. Crosby Drilling Co., and Pure Oil Co., Fair Bldg., Fort Worth and Esperson Bldg., Houston, drilling, casing, developing new 5,500 ft. oil well, to Wynn Crosby Drilling Co., Esperson Bldg., Houston, approx. $25,000.

Tex., New Castle—OIL WELL—Morton & Elder, drilling, developing 4,800 ft. oil well test, Young Co.

Tex., Quitman—OIL WELL—C. L. McMahon, Inc., Tyler, drilling, developing deep test oil well.

Tex., Quitman—OIL WELL—E. H. R. Sabens, et al, Tyler, drilling, developing 6,000 ft. oil well test.

Tex., Roma—OIL WELL—W. B. Andrews, Insurance Bldg., Fort Worth, drilling, casing, developing 6,000 ft. oil well test.

Tex., Roma—OIL WELL—D. Lack & H. Nessley & Assoc., drilling, developing 4,000 ft. oil well, Starr Co.

Tex., Ropesville—OIL WELL—Geo. P. Livermore, Inc., Levelland, drilling, casing, developing 5,000 ft. rotary and cable tools type oil well test, Hoskley Co.

Tex., San Perlita—OIL WELLS—Standard Oil Co. of Kansas, Petroleum Bldg., Houston, drilling, casing, developing 5 or 6 deep test oil wells.

Tex., South Anahuac—OIL WELL—Standard Oil Co. of Texas and Sale Dome, Petroleum Bldg., Houston, developing deep test oil well.

Tex., South Bend—OIL WELL—Anderson-Pritchard Co., Wichita Falls, drilling, developing 5,000 ft. oil well No. 1. H. C. & A. A. Walsh, A-1553.

Tex., Stiles—OIL WELL—National Refining Co., Midland, drilling, developing 3,600 ft. cable tool oil well.

Tex., Stowell—OIL WELL—Glenn H. McCarthy, Beaumont, drilling, developing new 9500 ft. oil well.

Tex., Texas City—COOLING TOWER—Republic Oil & Refining Co., reconstructing cooling towers at refinery.

Tex., Texas City—STORAGE TANKS—Republic Oil & Refining Co., repairing & constructing 6 steel storage tanks.

Tex., Wimberly Pool—OIL WELL—Cowden Drilling Co., Mid-Continent Bldg., Fort Worth, drilling, casing, developing deep test oil well.

Tex., Wink—OIL WELLS—Richardson & Bass, drilling, casing, developing new 10,000 ft. oil wells, Winkler Co.

Tex., Yantis—OIL WELL—Shell Oil Co., Deere Park, Houston, drilling, developing deep test oil well, Wood Co.

Tex., Yellow Lake—OIL WELL—Texas Co., 1700 San Jacinto, Houston, drilling, developing new deep test oil well, near here.

Tex., Yorktown—OIL WELL—Adams & Gas Co., Corpus Christi, drilling, casing, developing new 10,000 ft. oil well test. Dee Co.

†**Washington**—GATE HOUSE—U. S. Eng., 800 3 Ave., Seattle, Zone 4, gate house, utility yard, Neg. No. 705, Grant Co.

†**Washington** — IMPROVEMENTS — U. S. Eng., 800 Third Ave., Seattle, Zone 4, improvements, bituminous treatment for dust control, Neg. Nos. 718 and 719, Spokane Co.

†**Washington** — RAILROAD SPUR — U. S. Eng., 800 Third Ave., Seattle, Zone 4, railroad spur, Neg. No. 722, Grant Co.

†**Washington**—RANGE, etc.—U. S. Eng., 800 Third Ave., Seattle, Zone 4, transfer range, Neg. No. 726, cover apron, Neg. No. 725, Pierce Co.

†**Washington**—SHELTER, etc.—U. S. Eng., 800 3 Ave., Seattle, Zone 4, locomotive shelter and spur track, Neg-712, Pierce Co.

†**Washington** — SHELTER FACILITIES—U. S. Eng., 800 3 Ave., Seattle, Zone 4, shelter facilities, Neg-716, King Co.

†**Washington**—RIFLE RANGE, etc.—U. S. Eng., 800 3 Ave., Seattle, Zone 4, rifle range, Negotiation No. 709; night lighting, Negotiation 711, both Grant Co.

†**Washington** — TARGET RANGE—U. S. Eng., 800 3 Ave., Seattle, Zone 4, improvement target range, Neg. No. 706, Grant Co.

Wash., Vancouver—RAMP—Spokane, Portland & Seattle Ry. Co., A. J. Wyche, engr., American Bank Bldg., Portland, building west ramp, 200 ft. bituminous concrete paving, on W. 26 St. viaduct.

†**West Virginia** — AIRPORT IMPROVEMENTS—City Clerk, City Hall, Martinsburg, airport imprvs., Berkeley Co. CAA.

Wis., Appleton—WATER GAS GENERATING SET—Wisconsin-Michigan Power Co., 137 W. Mill St., installing water gas generating set.

B. C., Fort St. John—HANGAR—Canadian Pacific Air Lines, Ltd., Windsor Station, Montreal, 2 story frame concrete foundation hangar ext. $40,000.

B. C., Masset—WHARF—Dom. Government, Ottawa, Ont., wharf reconstr., $25,000. P. Wks., Ottawa, Ont., engrs.

Man., St. James (Postal District, Winnipeg)—RUNWAYS—St. James-Winnipeg Airport Comm., c/o Alderman Simpkin, Winnipeg, 9,000 ft., and three 10,000 ft. runways.

Man., Winnipeg — PARKS — Municipal constr. 12 small parks along Pembina Hwy. $35,000.

N. S., Canso—WHARF—Dpt. P. W., Ottawa, Ont., wharf constr., $26,000. 7/27—ENR 7/29.

Que., Ball Comeau—WHARF—Dpt. P. W., Ottawa, Ont., reconstr. wharf, $37,000.

Que., Riviere au Renard—WHARF—Government, Ottawa, wharf constr. Dpt. Wks., Ottawa, engr. $50,000.

Que., St. Martin—DAM—Province of Quebec, Quebec City, dam, Chandiere R. $50,000. Quebec Streams Comn., 100 E. Dame St., Montreal, engrs.

Sask., Regina—DAM—Dom. Govt., Ottawa, Ont., rein.-con. dam on the Qu'Appelle R. in Sect. 24, Twp. 20, Prairie Farm Rehab., McCallum Hill Bldg., Regina, engr.

BIDS ASKED

Bids Asked August 24

†**Ohio** — IMPROVEMENTS — National Advisory Committee for Aeronautics, Cleveland Airport, Cleveland, improvements.

†**Vermont** and **Connecticut**—BORING & EXPLORATION WORK—U. S. Eng., 419 Industrial Trust Bldg., Providence, R. I., boring & exploration work No. 44-13, Winham Co., etc.

Bids Asked

†**Conn., Stratford** — HANGAR — Chance Vought Aircraft Div., United Aircraft Co., 550 Main St., concrete, steel double hangar. Albert Kahn Associated Engrs. & Architects, 345 New Center Bldg., Detroit, Mich., engrs. Federal Finances.

ASSIFIED (Bids Asked, Cont'd.)

Bids Asked

achusetts — IMPROVEMENTS — U. S. 819 Industrial Trust Bldg., Providence. (selected list bidders), imprvs. 44-11. Co.

BIDDERS

ona—IMPROVEMENTS—U. S. Eng., Figueroa St., Los Angeles, 14, Calif., No. 133, Cohise Co., from Wallace Wallace, P. O. Box 108, Tucson, over 00.

ho, Lewiston—AIRPORT RUNWAYS—Aeronautics Admin., Boeing Field, Seat- Wash., Aug. 10, extending runways port from Northwestern Eng. Co., Rapid S. D., $147,200. CD 7/30—ENR 8/5.

., Boston—WATCH TOWER, etc.—Suf- Co., office of Sheriff, 215 Charles St., t. Aug. 13, 3 story, 12x12 ft. watch tearing down east wall and building all, Charles St. Jail, from Daniel Cun- am Constr. Co., Inc., 20 Kilby St., 0. CD 8/5.

klahoma—IMPROVEMENTS—U. S. Eng., Wright Bldg., Tulsa, Zone 2, imprvs., grading, Sol. 957-neg-44-15, Wood- Co., from Secor Building Co., Colcord Oklahoma City, $119,000. CD 7/20 7/22.

ah, Lucin—AIRPORT ALTERATIONS—Aeronautics Admin., 1500 4 St., Santa a, Calif., Aug. 5, addnl. work at Lucin rt, from H. O. Bauerle, 220 E. Valley El Monte, Calif., $64,506.

TRACTS AWARDED

abama—IMPROVEMENTS—U. S. Eng., St. W. of Westwood St., Mobile, clearing, ng, paving, Dallas Co., to E. J. & W. L. Co., Bell Bldg., Montgomery. Est. under 00.

lifornia—FACILITIES—U. S. Eng., 751 igueroa St., Los Angeles, Zone 14, addnl. ities, Contr. 509-Eng-5365, Santa Barbara to E. P. Dentzel, Beverly Hills, and Geo. Whyte, Jr., Alhambra, $183,000.

lifornia—FACILITIES—U. S. Eng., 751 igueroa St., Los Angeles, Zone 14, facili- Contr. 509-Eng-5369, San Diego Co., to e and King, 4700 San Fernando Rd. W., Angeles, $41,000.

lifornia—MOCK-UP AREA—U. S. Eng., Figueroa St., Los Angeles, Zone 14, e-up fortified area, Contr. 509-Eng-5385, Luis, Obispo Co., to L. A. Wilson, Whit- $25,000.

lifornia — LIGHTING SYSTEM — U. S. 751 S. Figueroa St., Los Angeles, Zone hting sys., Contr. 509-Eng-5406, Ventura to Clyde W. Wood, Inc., 6900 Tujunga N. Hollywood, $26,000.

alif., South San Francisco—PILING NDATIONS, etc.—Yards & Docks, Navy 18 St. and Constitution Ave. N.W., D. C., piling fdns., completing hangar, liary Air Facility, Mills Field, NOY 6622. Barrett & Hilp, 918 Harrison St., San ncisco, $426,391.

nn., East Hartford—HELICOPTER TEST SE, etc.—Hamilton Standard Propellers, United Aircraft Corp., 400 Main St., steel helicopter test house, tower, St., to R. G. Bent Co., 93 Edwards St., ford. Albert Kahn Associated Engineers rchitects, Inc., 345 New Center Bldg., it, Mich., engrs. Federally financed.

istrict Columbia — CONSTRUCTION — s & Docks, Navy Dpt., 18 St. and Con- tion Ave. N.W., Wash., D. C., completion rk under NOY 4426, NOY 7128, to Har- Nebel Constr. Co., 1520 K St. N.W.

lorida—AIR-CONDITIONING SYSTEM— Eng., 575 Riverside Ave., Jacksonville, ., air-conditioning sys., Inv. Neg-Jax-44- Orange Co., to Falkner, Inc., Orlando, r $50,000. Awarded 8/10.

lorida—HANGAR—U. S. Eng., 575 River- Ave., Jacksonville, Zone 2, hangar, Neg- 44-75, Dade Co., to Chalker & Lund Co., Georgia Ave., West Palm Beach, under 000. Awarded 8/10.

Florida — IMPROVEMENTS — Yards & Docks, Navy Dpt., 18 St. and Constitution N.W., Wash., D. C., imprv. outlaying s, Naval Training Center, NOY 6561, to dard Constr. Co., Columbus, Ga., $678,000.

lorida—FACILITIES—U. S. Eng., 575 rside Ave., Jacksonville, Zone 2, truck facilities, Highlands Co., to Gabel Constr. 216 Graham Bldg., Jacksonville, under 00. Awarded 8/2.

eorgia—CLEARING, etc.—U. S. Eng., Office Bldg., Savannah, clearing, grub- grading and draining, Contr. 819-Eng- Daugherty Co., to Latham Bros. Constr. Guaranty Bldg., West Palm Beach, Fla., 00.

eorgia—CLEARING, etc.—U. S. Eng., Post Bldg. Savannah, clearing, grubbing, ing, Contr. 819-eng-1625, Clinch Co., to ams Brothers, Meridian, $26,000.

★†**Georgia**—CLEARING, etc.—U. S. Eng., Post Office Bldg., Savannah, clearing, grubbing, grading, paving, Contr. 819-eng-1628, Lowndes Co., to MacDougald Constr. Co., Northside Dr., N.W., Atlanta, $522,000.

†**Illinois**—HEATING SYSTEM—U. S. Eng., Clock Tower Bldg., Rock Island, heating sys., Contr. 741-eng 4345, Rock Island Co., to Carstens Bros., Ackley, Ia., $114,000.

†**Illinois**—RAMPS, etc.—U. S. Eng., Clock Tower Bldg., Rock Island, ramps, roads, parking areas, Contr. 741-eng-4329, Rock Island Co., to J. H. Freeman, Moline, $137,000.

Louisiana—OIL WELL—Shell Oil Co., Deer Park, Houston, Tex., drilling, casing, developing oil well, to Cron & Gracey Drilling Corp., Esperson Bldg., Houston, Tex., approx. $25,000.

†**Maine**—GRADING, etc.—U. S. Eng., 31 St. James Ave., Boston, Mass., grading, planting, No. 19-023-44-Neg.-11, to Littlefield & Wyman, Abington, Mass. Est. under $50,000. Bids 7/30.

†**Massachusetts**—TOWER—U. S. Eng., 31 St. James Ave., Boston, tower reconstruction, No. 19-023-44-Neg-13, Barnstable Co., to Terry Engrg. Co., 10 Park Ave., New York, N. Y., under $50,000. CD 8/2.

†**Michigan**—REMODELING, etc.—U. S. Eng., 520 Merchandise Mart, Chicago, Ill., remodeling and constructing facilities, Contr. 11-032-Eng-510, Calhoun Co., to Miller-Davis Co., Kalamazoo, $42,000.

†**Mississippi**—WATER TARGETS—U. S. Eng., Grant St. west of Westwood St., Mobile, Ala., water targets, Inv. 569-44-30, Harrison Co., to Ernest Constr. Co., Inc., 174 Louiselle St., Mobile, Ala., under $50,000. Awarded 8/10.

†**Missouri**—FACILITIES—U. S. Eng., 10 E. 17 St., St. Louis, converting facilities, Contr. 23-028-eng-8, Phelps Co. to Shulenburg & Darr-Builders, 3805 Holly Hills Blvd., St. Louis, $76,000.

†**Missouri**—IMPROVEMENTS—U. S. Eng., 10 E. 17 St., Kansas City, imprvs., storage magazine, Phelps Co., to Johnson Dickson & Johnson, 882 E. Delmar St., Springfield. Est. under $50,000.

†**Nebraska**—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs. bldgs., Buffalo Co., to Rentlar Co., Kearney. Under $50,000.

†**Nebraska**—IMPROVEMENTS—U. S. Eng., 1709 Jackson St., Omaha, imprvs., Saunder Co., to Kingery Constr. Co., 1941 Y St., Lincoln. Est. under $50,000.

†**Nevada** — IMPROVEMENTS — U. S. Eng., 751 S. Figueroa St., Los Angeles 14, Calif., imprvs., No. 124, Clark Co., to Gibbons & Reed Co., 1250 N. Carmen Dr., Glendale. Under $50,000.

†**New Hampshire**—IMPROVEMENTS—U. S. Eng., 819 Industrial Trust Bldg., Providence, R. I., imprvs., service and access roads, No. 44-7, Cheshire Co., to Carlo Bianchi & Co., Inc., 24 Union Ave., Framingham, Mass. Est. $100,000-$500,000. Bids 8/9. CD 8/5.

†**New Jersey**—DOLPHINS, etc.—U. S. Eng., 120 Wall St., New York, 5, N. Y., dolphins and catwalks, Middlesex Co., to Spearin, Preston & Burrows, 50 Church St., New York, N. Y. Est. over $100,000.

†**New Jersey**—FACILITIES—U. S. Eng., 120 Wall St., New York, 5, N. Y., facilities, Contr. 30-075-Eng-1, Essex Co., to Hansen-Jensen, Inc., 427 N. Broad St., Elizabeth, $37,000.

†**New Jersey** — IMPROVEMENTS — U. S. Eng., 120 Wall St., New York, 5, N. Y., imprvs., bldgs., Essex Co., separate contracts. Est. $35,000.

†**New Mexico**—ELECTRICAL DISTRIBUTION SYSTEM — U. S. Eng., Albuquerque, outside electrical distr. sys., lighting etc., Santa Fe Co., to Deason-Yearout Electric Co., Albuquerque. Est. $29,000.

★†**New York**—GRADING, etc.—U. S. Eng., Chimes Bldg., Syracuse, addnl. grading, paving, drainage, Contr. 321-Eng-954, Jefferson Co., to D. W. Winkelman Co., Heffernan Bldg., Syracuse, approx. $657,000.

★†**New York** — IMPROVEMENTS — U. S. Eng., Chimes Bldg., Syracuse, imprvs. at army air forces installation, Erie Co., to Poirier & McLane Corp., 33 W. 42 St., New York. To exceed $1,000,000. Bids 7/12. CD 7/1.

†**Ohio**—BOILER ROOM PIPING—U. S. Eng., 522 U. S. Post Office & Courthouse, Cincinnati, piping for boiler room for Cleveland General Hospital, Cuyahoga Co., to W. B. Van Sickle Co., 1623 St. Clair Ave., Cleveland. $24,492.

†**Ohio**—IMPROVEMENTS—National Advisory Committee for Aeronautics, Cleveland Airport, Cleveland, improvements, to James McHugh Const. Co., 501 Babbitt Rd., Cleveland. Est. $240,000. Bids asked July 28. CD 7/14—ENR 7/22.

†**Oklahoma**—FACILITIES—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, addnl. facilities, Contr. 957-Eng-2045, Oklahoma Co., to Stephens-Brown, Inc., BMA Bldg., Kansas City, Mo. Approx. $245,000.

†**Oklahoma**—IMPROVEMENTS—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, imprvs., paving, Garfield Co., to L. B. Fugitt, Colcord Bldg., Oklahoma City, under $50,000.

†**Oklahoma**—TARGETS, etc.—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, firing targets, etc., Muskogee Co., to LeRoy B. Fugitt, W. 16 St., Oklahoma City. $82,000.

†**Oklahoma**—UTILITY YARD—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, utility yard, Sol. 957-neg-44-1, Okmulgee Co., to Smith-Nashert Co., Philtower Bldg., Tulsa, $33,110.

†**Okla., Norman**—LANDING MAT, etc.—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., paved landing mats, facilities of outlying fields, NOY 6370, to Ward & Park, 711 N.W., 38 St., Oklahoma City, $391,294.

†**South Carolina**—IMPROVEMENTS—U. S. Eng., Florence, imprvs., Iden. No. 231-44-18, Sumter Co., to Southern Constr. Co., Barnwell, $50,000-$100,000. Awarded 8/7.

†**Texas**—FIRING RANGES—U. S. Eng., Fort Sam Houston, addn. firing ranges, Bell Co., to D. Word, 446 E. Rosewood St., San Antonio, $36,000.

†**Texas**—GAS LINES—U. S. Eng., Fort Sam Houston, natural gas lines, Bastrop Co., to M. F. Fisher & Son, Milam Bldg., San Antonio, under $50,000.

†**Texas**—GASOLINE and FUELING SYSTEM—U. S. Eng., 416 Wright Bldg., Tulsa, 2, Okla., addnl. gasoline and fueling sys. units, Dallam Co., to H. J. Happel & Co., Muskogee, under $27,000.

†**Texas**—IMPROVEMENTS—U. S. Eng., 25 St. and Avenue F, Galveston, imprvs., palliative or dust control, Hidalgo Co., to Paul G. Maddox, San Angelo, about $25,000.

†**Texas**—IMPROVEMENTS—U. S. Eng., 25 St. and Avenue F, Galveston, imprvs., Jim Wells Co., to Brown & Root, 4300 Calhoun Rd., Houston. $172,000.

†**Wyoming**—APRONS, etc.—U. S. Eng., 1709 Jackson St., Omaha, Neb., aprons, pipe tunnel, incl. utilities, Contr. 25-066-eng-7, Laramie Co. to Peter Kiewit Sons Co. and Big Horn Constr. Co., 4521 Dodge St., Omaha, Neb. $480,000.

Alta., Lethbridge—IMPROVEMENTS—Dpt. Transport, Ottawa, Ont., imprvs., stripping, grading, rolling, fertilizing, seeding, fencing, open-ditches, drains, etc., to Dutton Brothers & Co., Calgary, about $80,000. CD 5/20—ENR 5/27.

★†**Alta., Namao** — IMPROVEMENTS—U. S. Eng., 10041 102 St., Edmonton, imprvs., bldgs., etc., to Coast Constr. Co. Ltd., 510 W. Hastings St., Vancouver, B. C. $4,500,000. CD 6/23—ENR 7/1.

B. C., Port Hardy—APPROACH WIDENING, etc.—Dpt. Pub. Wks., Ottawa, Ont., approach widening and constructing shed and fdn., to Todd Constr. Co., Ltd., Nanaimo St., Burrard Inlet, Vancouver, $29,741.

Man., Neepawa — IMPROVEMENTS — Dpt. National Defense (Air), Ottawa, Ont., imprvs., addn. hangar accommodations at E. F. T. school to Claydon Co., Ltd., 290 Garry St., Winnipeg, $52,000.

Nova Scotia—IMPROVEMENTS—Dpt. Natl. Defense (Air), Ottawa, wooden constr. at E.F.T. School, hangar extens., etc., to Eastern Seaboard Constr. Co., Ltd., Halifax, $76,000.

Ont., Fingal—IMPROVEMENTS—Dpt. Natl. Defense (Air), Ottawa, resurfacing runway and taxistrips, No. 4 Bombing and Gunnery School, to Municipal Spraying & Oiling Co., Ltd., 225 Sterling Rd., Toronto, about $65,000.

Ont., Willoughby — IMPROVEMENTS — Transport Dpt., Ottawa, clearing, stumping, smoothing and drainage, to Angus and Taylor, Ltd., 99 W. Main St., North Bay. $67,000.

Que., Cap de La Madeleine—HANGAR—Dpt. National Defense (Air), Ottawa, Ont., land plane hangar at No. 11, E. F. T. School, to Page Equipment & Constr. Co. Ltd., 1497 Craig St., Three Rivers. Approx. $72,000. CD 6/23—ENR 7/1.

Que., St. Eugene—HANGAR—Dpt. National Defense (Army), Ottawa, Ont., hangar extensions, addn. accommodations, etc., No. 13, E.F.T. School, to M. Sullivan & Son, Ltd., Armprior, Ont., $58,000.

Que., Point Au Pere—WHARF—Dpt. Pub. Wks., Ottawa, Ont., reconstructing portion of wharf, to J. Emile St. Pierre, Rimouski, $99,144.

Que., Windsor Mills—HANGAR—Dpt. Natl. Defense (Air), Ottawa, Ont., ½ land plane hangar at E. F. T. School to J. A. Verret, Ltd., 67 2 Ave. Sherbrooke. Est. $72,000.

Sask., Weyburn—DAM—K. A. Blau, municipality clk., dam across Souris River, to Newman Co. Ltd., 825 Tache St., Winnipeg, Man. Est. $25,000.

LATIN AMERICA

Brazil, Rio de Janeiro—Brazilian Federal Govt., c/o Industrial Workers Dwelling Institute, plans 46,000 unit housing, **Realengo** on outskirts Rio de Janeiro. $30,000,000.

LATIN AMERICA (Continued)

Brazil, Sao Paulo—Sao Paulo Tramway Co., Sao Paulo, plans electrification of Sorocabana Railway. $300,000.

Chile—Fomento de Chile Corp., 120 Bway., New York, N. Y., plans steel plant.

Mexico—Federal Dept. Pub. Works & Communications, Mexico City, c/o National Irrigation Committee, plans completion of Nejapa Dam in Oaxaca State. $2,000,000.

Mexico—Mexican Government, Depto. de Salubridad Publica, Mexico, D. F., tap water and sanitation services in 71 communities in 20 states along Mexican sections of Pan-American Hy. in cooperation with Office, Coordinator of Inter-American Affairs, Commerce Bldg., 14 St. bet. E St. and Constitution Ave. N.W., Wash., D. C., and Direction of Inter-American Health Cooperation Service. $2,750,000.

Mexico—National Rys. of Mexico (Ferrocarriles Nacionales de Mexico), Bolivar and 5 de Mayo, Mexico, D.F., L. Reina, ch. engr., M.W., plans railroad passenger-freight grand central, warehouses, machinery shelters, roundhouse, second class rolling stock repair shops, **Torreon,** state of Coahuila, $2,250,000. President Manuel Avila Camacho has named engineering commission to make plans, for same; Mexican Govt., Scrita de la Marina, Mexico, D.F., plans naval academy, naval offices, quarters for cadets, instructors and employees, **Vera Cruz,** state of Vera Cruz, $735,000; Acapulco Govt., Palacio Municipal, Acapulco, plans public market, **Acapulco,** state of Guerrero, $105,000; Leon Govt., Palacio Municipal, Leon, Gto., Mexico, Guillermo Vera, mayor, plans public market, **Leon,** state of Guanajuato, $125,000.

Mexico, Monterrey — Monterrey Cement Works, c/o C. Villareal, Monterrey, plans expansion cement manufacturing plant.

PUBLIC BUILDINGS

PROPOSED WORK

†**Ala., Huntsville**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash., 25, D. C., schools, Units A and B, Docket Ala. 1-213.

†**Arizona**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, Calif., plans by Place & Place, 20 E. Pennington Ave., Tucson, 60 family dwelling units, Ariz. 2328. CD 7/27—ENR 7/29.

†**Ariz., Gila Bend**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, Calif., 34 family dwelling units, Ariz. 2326 and 30 dormitory units, Ariz. 2327.

†**Callfornia**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, plans by J. J. Donovan, 950 Market St., Berkeley, family dwelling units, Calif. 4749. CD 8/11—ENR 8/19.

†**Callfornia**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, plans by G. Stanley Wilson, 3681 6 St., Riverside, trailer camp, Calif. 4750. CD 8/11—ENR 8/19.

†**California**—U. S. Eng., 74 New Montgomery St., San Francisco, bldgs., Job Nos. 928 and 057, central California.

†**California**—U. S. Eng., 74 New Montgomery St., San Francisco, bldgs., Job No. 1103-1, central California.

†**California**—U. S. Eng., 74 New Montgomery St., San Francisco, fire station, Job No. 1040, central California.

†**California**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., infirmary bldg., accessories for Coast Guard.

†**California**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave N.W., Wash., D. C., supervisory engineering services by Holmes-Narver, 639 S. Spring St., Los Angeles, bldg., Camp Pendleton and N A D Fallbrook, NOY 7182.

†**Calif., Alameda-Oakland** — Pub. Housing Auth., NHA, 785 Market St., San Francisco, 1,000 family dwelling units, Calif. 4749.

†**Calif., Berkeley**—Home Owners' Loan Corp., Pacific Bldg., San Francisco, converting residence at 2301 Cedar St., into 5 living units, Job No. W4B-946.

†**Calif., Berkeley**—Home Owners' Loan Corp., Pacific Bldg., San Francisco, converting residence on Hillegrass Ave., into 4 living units, Job No. W4B-975.

†**Calif., Blythe**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 50 family trailers or portable units, Calif. 4750.

†**Calif., Eureka**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 320 family dwelling units, Calif., 4745.

†**Calif., Lompoc**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 144 dormitory units, Calif. 4753.

†**Calif., Oakland**—Home Owners' Loan Corp., Pacific Bldg., San Francisco, converting residence at 2205 Seventh Ave. into 4 living units, Job No. W4B-954.

†**Calif., Oakland** — Home Owners' Loan Corp., Pacific Bldg., San Francisco, plans by F. Wynkoop, 821 Market St., San Francisco, converting commercial and club bldg., into 40 living units, Job No. W4B-1080, over $100,000.

†**Calif., Oakland**—Home Owners' Loan Corp., Pacific Bldg., San Francisco, plans by R. A. Hutchison, 3433 Andover St., converting property to provide 3 addnl. living units, 275 Ridgeway Ave., Job No. W4B1-491, $5,500.

†**Calif., Pleasanton**—Pub. Housing Auth., NHA, 785 Market St., San Francisco, 80 family dwelling units, Calif. 4754, and 108 dormitory units, Calif. 4755.

†**Florida**—Defense Homes Corp., Longfellow Blvd., Wash., D. C., 144 dormitory units, Wainwright Shipyards. $144,000.

★†**Florida**—Defense Homes Corp., Longfellow Bldg., Wash., D. C., bids soon family housing units, Wainwright Shipyards. $1,500,000.

†**Florida**—Defense Homes Corp., Longfellow Bldg., Wash., D. C., family housing units, at International Paper Corp. of Southern Kraft Co. $240,000.

†**Florida**—Defense Homes Corp., Longfellow Bldg., Wash., D. C., bids soon dwellings. $180,000.

†**Fla., Panama City**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Atlanta, Ga., 500 family dwelling units, Fla. 8223; 80 family dwelling units, Fla. 8224; 60 family dwelling units, Fla. 8225 and 140 dormitory units, Fla. 8226.

†**Fla., Tampa**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., 120 family dwelling units, Fla. 8227, and 500 family dwelling units, Fla. 3-4.

†**Ga., Atlanta**—Pub. Bldgs. Admin., 18 and F Sts. N.W., Wash. 25, D. C., Grady Hospital nurses home, Docket No. GA. 9235.

†**Ga., Rome**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, 100 family dwelling units, Ga. 9161.

†**Indiana**—U. S. Eng., Evansville, plant imprvs., Vanderburgh Co. $103,000. E. C. Berendes, 121 N. 4 St., Evansville, archt.

†**Iowa**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave., N.W., Wash., D. C., engineering services by Fugard, Olsen, Urbain & Beider, 520 N. Michigan Ave., Chicago, Ill., in connection with closing out Contract NOY 5710.

†**Kan., Independence**—Home Owners' Loan Corp., Woodmen of the World Bldg., Omaha, Neb., 40 family building conversion.

†**Kan., Liberal**—Home Owners' Loan Corp., Woodmen of the World Bldg., Omaha, Neb., 20 family building conversion.

†**Kan., Liberal**—Pub. Housing Auth., NHA, Dierks Bldg., 1006 Grand Ave., Kansas City, Mo., 180 family unit housing, Kan. 14136.

†**Kentucky**—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., plans by Wilson, Bell & Watkins, 145 E. High St., Morganfield, 50 unit dormitory housing and facilities. CD 8/2—ENR 8/5.

†**Kentucky**—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, O., 64 unit dormitory housing, Ky. 15110.

†**Louisiana**—Gulf Distilling Corp., Gretna, soon lets contract yeast house at plant. Defense Plant Corp. will finance. W. B. Moses and L. S. Weil, 427 S. Peters St., New Orleans, engrs.

†**Me., Portland**—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., 200 unit family housing, Me. 17082.

†**Maryland**—Pub. Housing Auth., NHA, Temporary Bldg. 2, 19 and D Sts. N.W., Wash., D. C., plans nearing completion by A. L. Cassell, 1930 14 St. N.W., Wash., D. C., family dwelling units, Md. 18250 and Md. 18252. H. C. Primrose, 10 W. Chase St., Baltimore, site engr. CD 4/12—ENR 4/15.

†**Massachusetts**—Pub. Housing Auth., NHA, 24 School St., Boston, bids early September, 1 story, 50x90 ft. permanent community bldg., Mass. 19021. M. Maloney, 220 Dwight St., Springfield, archt.

†**Michigan**—Pub. Housing Auth., NHA 2073 E. 9 St., Cleveland, O., plans by O. Winn and P. Brezner, Highland Park, 250 unit temporary family dwellings, MI-20180. CD 8/2—ENR 8/5.

†**Michigan**—Pub. Housing Auth., 2073 E. 9 St., Cleveland, O., bids soon drainage work at housing projects. W. Lehner, Mt. Clemens, engr.

†**Minnesota** — Northwest Flax Industries, J. A. Johnson, pres., Winona, flax plant to process flax straw for rayon and plastics manufacturing. $215,000. Defense Plant Corp. will finance.

†**Mississippi**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., plans by I. Daniel Gehr, and J. Allen Bradford, Old People Bank Bldg., Biloxi, family dwelling units, Miss. 2217. CD 7/28—ENR 8/5.

Miss., Biloxi—Bd. Educ., c/o G. Ditto, supt., plans by Collins & Dacey, Biloxi, school imprvs. $30,000. Applied for FWA funds.

Mo., Higginsville—Confederate Home, Higginsville, and State Eleemosynary Bd., Jefferson City, converting [illegible] Confederate Home [illegible] $195,000.

†**Mo., Nevada**—Home Owners' Loan Co[illegible] Sterick Bldg., Memphis, Tenn., 20 fa[illegible] building conversion.

†**Neb., Omaha**—Home Owners' Loan Co[illegible] Woodmen of the World Bldg., 20 fa[illegible] building conversion.

†**N. C., Goldsboro**—Pub. Bldgs. Admin., 18 and F St. N.W., Wash., 25, D. C. [illegible] center bldg., Docket 21-278.

†**N. C., Goldsboro**—Pub. Bldgs. Admin., and F Sts. N. W., Wash., 25, D. C. [illegible] home, Goldsboro Hospital, Docket 21-[illegible]

N. C., Raleigh—State Bd. Education, R. B[illegible] ton, supt. Pub. Schools, Court House, [illegible] plant to service school busses. $50,000-$100,000.

†**Ohio**—Pub. Housing Auth., NHA, 2073 Ninth St., Cleveland, family dwelling units, Ohio 33278.

†**O., Cleveland**—Pub. Housing Auth., NHA, 2073 E. 9 St., 700 unit family housing, O[illegible] 33276.

†**O., Newark**—Home Owners' Loan Co[illegible] 209 W. 7 St., Cincinnati, 50 unit family hou[illegible] ing conversion.

†**O., Toledo**—Pub. Housing Auth., NHA, 2073 E. Ninth St., Cleveland, 50 trailers or portable shelter units, Ohio 33277.

†**Ore., Hermiston**—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle 1, Wash., 100 unit family housing, Ore.-35073.

†**Ore., Toledo**—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle 2, Wash., 100 unit family housing, Ore. 35[illegible] 50 trailer or portable unit housing, Ore. 35[illegible] 40 unit family housing, Ore. 35273; 40 trailer or portable unit housing, Ore. 33274.

†**Pennsylvania**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., soon takes bids bldg. $250,000. J. Carroll, 1700 Walnut St., Phila., archt.

†**Pa., Allentown—Bethlehem**—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., 150 family dwelling units, Pa. 3648.

†**R. I., East Greenwich**—Federal Works Agency, 99 Chauncy St., Boston, Mass., plans nearing completion by E. O. Ekman, Natick Ave., Greenwood, two 1 story, 20[illegible] ft., and one 1 story, 50x60 ft., brick bldg. addns. $45,000. CD 5/24—ENR 5[illegible]

†**Texas**—Pub. Housing Auth., NHA, Electric Bldg., Seventh and Taylor Sts., Fort Worth, plans by Stone & Pitts, Salsbury, McGinty & Werlin, 2017 W. Gray, Houston, 500 family dwelling units, Tex. 41-595 CD —ENR 8/12.

†**Texas**—Pub. Housing Auth., NHA, Electric Bldg., Fort Worth, plans by Stone, Pitts, and Salisbury, McGinty & Werlin, 2[illegible] W. Gray, Houston, 250 dormitory units, [illegible] 41-596. CD 7/29—ENR 8/12.

†**Texas**—Pub. Housing Auth., NHA, Electric Bldg., Seventh and Taylor Sts., Fort Worth, plans by Page, Southerland & Page and W. B. Livesay, Nalle Bldg., Austin, dwelling units, Tex. 41-597.

†**Texas**—Pub. Housing Auth., NHA, Electric Bldg., Seventh and Taylor Sts., Fort Worth, plans by Hedrick & Lindsley, 811 Standard Bdg., Houston, 100 family dwelling units, Tex. 41-598. CD 7/27—ENR 7/29.

†**Texas**—U. S. Eng., Albuquerque, N. M., addn. facilities, bldgs., El Paso Co. CD 7[illegible]

†**Tex., Amarillo**—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, 50 trailers or portable units, Tex. 41607.

†**Tex., Bastrop**—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Forth Worth, 60 family dwelling units, Tex. 41-602 and 40 family dwelling units, Tex. 41-603.

†**Tex., Dallas**—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Forth Worth, 1,000 trailers or portable units, Tex. 41-605.

†**Tex., Fort Worth**—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., lease, repair 100 existing dormitories, Wesleyan College, Tex. 41-604.

†**Tex., Galveston**—National Housing Admin., 1737 L St. N. W., Wash., D. C., housing units.

Tex., Galveston—Jno. Sealy Hospital, Medical Branch, University of Texas, psychopathic hospital, facilities.

Tex., LaPorte—LaPorte Ind. School Dist., plans by Hedrick & Lindsley, 818 S. Standard Bldg., Houston, school. $150,000.

Tex., Lufkin—Angelina Co., c/o Judge, plans by Hedrick & Lindsley, 811 S. Standard Bldg., Houston, 2 story, brick, tile, reinforced hospital bldg., facilities.

†**Utah**—Pub. Housing Auth., NHA, Dierks Bldg., 1006 Grand Ave., Kansas City, Mo., 96 unit dormitory housing, Utah 42161, Dog[illegible] way Valley.

LIC BLDGS. (Proposed Work, Cont'd.)

tah, Salt Lake City—Pub. Housing Auth., Dierks Bldg., 1006 Grand Ave., Kansas Mo., 100 trailers, Utah 42165.

tah, Wattis—Pub. Housing Auth., NHA, ks Bldg., 1006 Grand Ave., Kansas City, 40 unit family housing, Utah 42162.

irginia—Pub. Housing Auth., NHA, Tem- y Bldg. No. 2, 19 and D Sts. N.W., Wash., indefinitely postponed bids to have opened Aug. 6, 768 unit dormitory hous- Va. 44278. Carneal, Johnson & Wright, Atlantic Life Bldg., Richmond, archts. 7/21—ENR 7/29.

irginia—U. S. Eng., Arlington, bldgs., gton Co. $100,000-$500,000.

ashington—U. S. Eng., 800 3 Ave., Seat- Zone 4, shop facilities, Neg-715, Pierce

ashington—U. S. Eng., 800 Third Ave., tle, Zone 4, bldg., Neg. No. 724, Clallam

ashington—U. S. Eng., 800 Third Ave., tle, Zone 4, bldg., Neg. No. 730, and cold ge area, Neg. No. 719, Grant Co.

ashington—U. S. Eng., 800 Third Ave., tle, Zone 4, bldg. alterations, Neg. No. Spokane Co.

yo., Casper—Home Owners' Loan Corp., ific Bldg., San Francisco, Calif., 100 unit ly building conversion.

yo., Cheyenne—Home Owners' Loan Pacific Bldg., San Francisco, Calif., nit family building conversion.

yo., Cheyenne—Pub. Housing Auth., Dierks Bldg., 1006 Grand Ave., Kansas Mo., 240 unit family housing, Wyo.

a., Edmonton—Dominion Govt., Ottawa, plans by W. G. Taylor, coal controller, ary, strip mining projects in Airdrie, er, Dodds, Camrose, Castor, Tofield and h of Lake Wabamun, $150,000.

C., Vancouver—Dominion Govt., Ottawa, plans by Dpt. Pensions & National th, MacKenzie Ave., Ottawa, Ont., bar- s and training schools for discharged ers, $200,000.

e., Montreal—Rev. Sisters of the Con- ation of Notre Dame, 3040 Sherbrooke W. Montreal, bids soon, bldg., Notre e College. About $200,000-$250,000.

e., Kenogami—R. C. School Comm., ol, $150,000.

S ASKED

Bids Asked August 24

aine—Pub. Housing Auth., NHA, 24 ol St., Boston, Mass., 100 unit frame, e housing, Me. 17079. Over $150,000. s deposit $50 first set, and $10 each addnl. Wadsworth & Boston, 57 Exchange St., land, archts. CD 7/29—ENR 8/5.

aine—Pub. Housing Auth., NHA, at Fed- Bldg., Boston, Mass., family dwelling units, 17081, incl. site imprvs., grading, utilities, Plans deposit $50 first set, $10 ea. addnl. CD 8/2—ENR 8/5.

Y., Jamaica—Dpt. P. Wks., Municipal , New York, Zone 7, completion unfin- WPA project entitled "Conversion of House into Infectious Ward Bldg.," nsboro Hospital, 83-29 Parsons Blvd., ns Boro. Plans deposit $15.

Bids Asked about August 26

ew Jersey—Yards & Docks, Navy Dpt., t. and Constitution Ave. N.W., Wash., , bldgs., Sects. 3 and 4, Monmouth Co. , Naess & Murphy, 150 Bway., New , N. Y., engrs. CD 8/5, under BA.

Bids Asked after September 1

aryland—Pub. Housing Auth., NHA, Tem- y Bldg. 2, 19 and D Sts. N.W., Wash., dormitory units, Md. 18262, family dwell- units, Md. 18263; family dwelling units, 18264 and Md. 18265, L. Justement, 1223 necticut Ave., Wash., D. C., archt.

Bids Asked after September 2

ew Jersey—Pub. Housing Auth., NHA, Bway., New York 7, N. Y., 200 unit fam- wellings, NJ 28162. Plans deposit $50. ams & Churchhill, 56 W. 45 St., New , N. Y., archts. CD 7/28—ENR 8/5.

Bids Asked September 5

hio—Pub. Housing Auth., NHA, 2073 E. , Cleveland, 564 unit temporary family lings, Ohio 33263. Plans deposit $50. nded date. Potter, Tyler & Martin, 35 E. , Cincinnati, archts. CD 7/26—ENR 7/29, r BA.

Bids Asked September 8

., Evansville—Evansville State Hospital, Trustees, G. W. Schnute, pres., rebuild- tate Insane Hospital incl. five 3 and 4 , 110x206 ft., T-Shaped; 162x180, 162x180, 3 and 70x133 ft., main patients' bldgs.; ry, bsmnt., 45x105 administration bldg.; ry, bsmnt., 50x78 ft., Supt. residence, tunnels and connecting covered passages. deposit $50. McGuire & Shook, 1401 her Trust Bldg., Indianapolis, archts. M. Rotz Engr. Co., 804 Merchants Bank Bldg., Indianapolis, Zone 4, mech. engrs. CD 8/2—ENR 8/5.

Bids Asked September 28

†Ill., Downey—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash., D. C., addnl. infirmary bldgs. and utilities, No. 124, 125 and 126.

Bids Asked

†California—U. S. Eng., 74 New Montgomery St., San Francisco, fire station, Job No. 1053-1, central California.

†Maine—U. S. Eng., 31 St. James Ave., Boston, Mass. (selected list bidders), bldgs., Hancock Co.

†Massachusetts—Bethlehem-Hingham Shipyard, Inc., E. Howard St., Quincy (selected list bidders), terminal bldg., altering yard police bldg. Federally financed.

†Oklahoma—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, bldg., Sol. 957-Neg-44-31, Oklahoma Co.

†Rhode Island—U. S. Eng., 819 Industrial Trust Bldg., Providence (selected list bidders), altering bldg., Newport Co. Under $50,000.

LOW BIDDERS

★**†California**—City of Alameda Housing Auth., 511 Buena Vista Ave., family dwelling units, community and child service bldgs., Calif. 4721, for NHA, from Stolte, Inc., 1405 San Antonio Ave., Alameda, **$2,510,000.** CD 7/13—ENR 6/10.

†Connecticut—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., August 10, sewage treatment plant, collection sys., for housing, Conn. 6011 and 6014, from N. Benvenuti & Sons, 16 Elm St., New London, **$56,905.** Payne & Keefe, 231 State St., New London, archts. Aubrey & Keefe, 231 State St., New London, engrs. CD 8/5.

★**†Conn., Bridgeport**—St. Vincent's Hospital, 2820 Main St., August 10, brick, steel, limestone, nursing school, pediatric unit and hospital addn., Conn. 61-134, from Edward H. Bray Co., 362 River St., **$815,357.** Est. $1,115,000. FWA. CD 8/2—ENR 8/5.

†Maine—Pub. Housing Auth., NHA, 24 School St., Boston, Mass., Aug. 10, storm water drainage sys., grading, for housing, NH 27011 and NH 27012, from Wadley Nurseries, Central Ave., Yonkers, N. Y., **$103,328.** CD 8/2—ENR 8/5.

★**†Pennsylvania**—Pub. Housing Auth., NHA, 270 Bway., New York 7, N. Y., Aug. 12, family dwellings units, Pa. 36435, from Tobias Heller & Co., Inc., 441 Lexington Ave., New York, N. Y., **$1,827,000.** CD 8/5.

†Texas—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, Aug. 11, family dwelling units, Tex. 41-584 and dormitory units, Tex. 41-585, from Ramey & Mathis, P.O. Box 565, Orange, **$269,800.** CD 8/5.

†Texas—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, Aug. 10, dormitory units, Tex. 41-588 and family dwelling units, Tex. 41-589, from R. E. McKee, P.O. Drawer 562, El Paso, **$240,400.** CD 7/29.

†Texas—U. S. Eng., Fort Sam Houston, Aug. 10, bldg., Bexar Co., from G. W. Mitchell, 612 Builders Exchange Bldg., San Antonio, **$139,000.** CD 8/4

†Washington—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle, Zone 1, Aug. 10, 200 unit family housing, Wash., 45226, from Lease & Leigland, Dexter Horton Bldg., Seattle 4, **$342,400.** CD 8/3—ENR 7/22.

†Washington—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle, Zone 1, Aug. 6, housing, Wash. 45329 ,from J. I. Barnes Constr. Co., Smith Tower, Seattle, Zone 4, **$319,000.** CD 7/14—ENR 7/22.

CONTRACTS AWARDED

★**†Alabama**—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., to Algernon Blair, Inc., First Natl. Bank Bldg., Montgomery, for housing Ala. 1210, **$229,480,** Ala. 1211 and 1212, **$687,480.** CD 8/13.

†Alabama — Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., family dwelling units, Ala. 1213, to Hardin & Ramsey, 161 Spring St. N. W., Atlanta, Ga., **$397,800.** Bids 8/10. CD 7/29.

†California—Home Owners Loan Corp., 821 Market St., San Francisco, conversion of residence to provide 4 addnl. living units, No. W4B-984, Alameda Co., M. A. Sheldon, 681 Market St., San Francisco, archt. **$11,000.**

†Calif., Kearney Mesa—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., Wash., D. C., Marine Corps Women's Reserve facilities, NOY 6603 to Joshua H. Marks-Charde Co., 816 West 5 St., Los Angeles, **$352,583.**

†Calif., Oakland—Home Owners Loan Corp., Pacific Bldg., San Francisco, plans by A. A. Cantin, 705 Market St., San Francisco, converting 2 stores into dwelling units, Job No. W4A-274. **$15,000.**

†Calif., San Diego—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., 2 temporary storehouses and railroad, at Naval Supply Depot, NOY 6206, to Kemp Bros., 2900 Hyde Park Blvd., Los Angeles, **$85,152.**

†Calif., Santa Barbara—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., Marine Corps Women's Reserve facilities, NOY 6279, to R. A. Watson, 5528 Vineland Ave., No. Hollywood, **$197,965.**

★**†Calif., Terminal Island**—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., 5 story warehouse bldg., NOY 6638 to G. A. Bell Engr. Co., 816 West 5 St., Los Angeles, **$1,060,889.**

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, warehouse, bldg., Neg-Jax-44-94, Lee Co., to Moody Brothers, Fort Myers, under **$50,000.** Awarded 8/6.

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, bldg., Neg-Jax-44-62, Dade Co., to Lester F. Preu Corp., 1440 Alton Rd., Miami Beach, under **$500,000.** Awarded 8/5.

†Florida—U. S. Eng., 575 Riverside Ave., Jacksonville, Zone 2, bldgs., Neg-Jax-44-77, Orange Co., to Stevens & Sipple, 1920 N. Orange Ave., Orlando, under **$500,000.** Awarded 7/31.

†Fla., Tampa—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D.C., personnel housing, NOY 6685 to Paul Smith Constr. Co., Inc., 310 Rome Ave., Tampa, **$161,853.** CD 6/24—ENR 7/1.

†Georgia—U. S. Eng., Post Office Bldg., Savannah, bldg. facilities, Richmond Co., to Tri-State Constr. Co., 114 Ellis St. N.E., Atlanta. Bids. 8/6.

†Illinois—U. S. Eng., 520 Merchandise Mart, Chicago, bldgs., Winnebargo Co., to Sjostrom & Sons, Inc., 1718 Seventh Ave., Rockford, under **$100,000.**

†Illinois—U. S. Eng., Clock Tower Bldg., Rock Island, bldgs., addns., remodeling, Rock Island Co., to T. S. Willis, 326 Hayes Bldg., Janesville, Wis., under **$200,000.**

†Illinois—U. S. Eng., Clock Tower Bldg., Rock Island, temporary frame bldg., Contr. 741-Eng-4326, Rock Island Co. to John C. Tunnicliff, d.b.a. Tunnicliff Constr. Co., 105 Fillmore St., Davenport, Ia., **$300,000.**

†Louisiana—U. S. Eng., 25 St. and Avenue F, Galveston, Tex., warehouse and mechanical repair shop, Calcasieu Parish, to J. M. Brown Constr. Co., Ardis Bldg., Shreveport, approx. **$83,500.**

†Louisiana—U. S. Eng., 300 Bway., Little Rock, Ark., addnl. cold storage facilities, Rapides Parish, to Dixie Constr. Co., 209 Ward Bldg., Shreveport. Est. about **$100,000.**

†Michigan—U. S. Eng., 700 Union Guardian Bldg., Detroit, bldg. addns., alterations, Washtenaw Co., to Haberkorn-Barry Co., 719 Boulevard Bldg., Detroit, under **$1,000,000.**

†Missouri—U. S. Eng., 816 U. S. Courthouse & Customhouse, St. Louis, Zone 2, 1 story, 80x470 ft. brick bldg., Neg. 23-065-44-7 St. Louis Co., to Alport-Carlo Constr. Co., Ambassador Bldg., 411 N. 7 St., St. Louis, Zone 1, under **$500,000.** Bids Aug. 5.

†Missouri—U. S. Eng., 816 Courthouse & Customhouse, St. Louis, Zone 2, bldgs., Neg. 23-065,44-15, St. Louis Co., to Geo. L. Cousins Contg. Co., 875 North Skinker Blvd., St. Louis, Zone 5, under **$50,000.**

†New Jersey—Eastern Aircraft Div. General Motors, Corp., Edgar Rd. W., Linden, 1 story, factory, to Wm. Blanchard Co., 45 Poinier St., Newark. Federally financed.

†New Jersey—Pub. Housing Auth., NHA, 270 Bway., New York 7, N. Y., repairing housing, N.J. 28072 to Universal Engrs. & Waterproofing Service, 179 Ogden St., Newark, **$260,000.**

†New Jersey—Pub. Housing Auth., NHA, 270 Bway., New York, 7, N. Y., dormitories, site imprvs., utilities for housing N. J. 28160 and 28161 to Azzarone & Travers, 30-43-31 St., New York City, N. Y., **$179,164.** Additional to CD 7/27—ENR 7/29, under CA.

†New Jersey—U. S. Eng., 120 Wall St., New York, 5, N. Y., excav., piles for substructure of bldgs., Hudson Co., to Linde-Griffiths Co., 152 Passaic St., Newark, Est. **$100,000,** CD 8/9, under Earthwork, etc.

†New Jersey—U. S. Eng., 6 and Walnut Sts., Phila., Pa., bldg., Monmouth Co., to William Moncrieff & Co., 101 Navesink Ave., Rumson, Est. **$50,000.**

†New Jersey—Wright Aeronautical Corp., 132 Beckwith St., Paterson, plans by Albert Kahn Assoc. Engineers and Architects, Inc., 345 New Center Bldg., Detroit, Mich., engrs. and archts., 1 story, brick supercharge test cell bldg. **$40,000.** Federally financed.

†N. J., Hoboken—Bethlehem Steel Co., foot 14 St., 1 story, 120x320 ft., brick, plate shop to James Waters Corp., 415 Lexington Ave., New York, N. Y., **$450,000.** Federally financed. CD 7/19—ENR 7/22.

†N. J., Monmouth—Pub. Housing Auth., NHA, 270 Bway., New York 7, N. Y., 22 unit dormitory housing, NJ-28163.

PUBLIC BLDGS. (Contracts Awarded, Cont'd.)

†New York—U. S. Eng., Chimes Bldg., Syracuse, temporary frame bldg., Contr. 321-Eng-965, Oneida Co., to John J. Harvey Co., 2242 Whitesboro St., Utica, **$211,000.**

†N. Y., Scotia—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., lumber storage sheds, various facilities, N.S.D., NOY 7180, to Senior & Palmer, Inc., 475 Main St., Buffalo. **$128,705.**

†North Carolina—U. S. Eng., 308 Customhouse, Wilmington, bldg., Iden. 982-44-6, Onslow Co., to W. A. Foster, Burlington, under **$50,000.** Bids 7/31.

†North Carolina—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., NOY 6367, cold storage bldg. addn., Marine Air Corps Sta., Cherry Point, to W. L. Jewell, Sanford, **$157,300.** CD 6/7.

†Ohio—Pub. Housing Auth., NHA, 2073 E. 9 St., Cleveland, 60 unit temporary family dwelling, Ohio 33272.

†Ohio—U. S. Eng., 925 New Federal Bldg., Pittsburgh, Pa., grading, roadways., Cuyahoga Co., over **$25,000.** Wilbur Watson & Associates, 4614 Prospect Ave., Cleveland, engrs.

†Oklahoma—U. S. Eng., 416 Wright Bldg., Tulsa, Zone 2, bldgs., addnl. paving, drainage sys., Oklahoma Co., to L. Sanders, Tradesmen's Bldg., Oklahoma, **$400,000.** CD 8/12—ENR 8/19.

†Oklahoma—U. S. Eng., 231 W. Main St., Denison, Tex., bldgs., Marshall Co.

†Oklahoma—U. S. Eng., 231 W. Main St., Denison, Tex., bldg. Johnston Co.

†Oregon—Oregon Shipbuilding Co. (Kaiser), St. Johns, 100x200 ft., frame warehouse to Reimers & Jolivette, Exchange Bldg., Portland. **$50,000.** Federally financed. Wolff & Phillips, Pearson Bldg., Portland, archts. Awarded 8/2.

†Texas—Pub. Housing Auth., NHA, 1205 Electric Bldg., Seventh and Taylor Sts., Fort Worth, dormitory units, Tex. 41-569.

†Texas—Pub. Housing Auth., 1209 Electric Bldg., 4th and Taylor Sts., Fort Worth, housing units, incl. 30 remodeling units. **$350,000.**

†Texas—Pub. Housing Auth., NHA, 1205 Electric Bldg., 7th and Taylor Sts., Fort Worth, bids soon, 50 family dwelling units, Tex. 41-599, and 36 dormitory units, Tex. 41-600. CD 7/27—ENR 7/29.

†Texas—U. S. Eng., Fort Sam Houston, electrical work for paint shop, materials shed, Val Verde Co. to M. Wright Electric Co., Auditorium Circle, San Antonio, **$1,680.** CD 7/29—ENR 8/5 under CA.

†Texas—U. S. Eng., 231 W. Main St., Denison, bldgs., facilities, Deaf Smith Co.

†Tex., Castleberry — Castleberry Common School Distr. No. 93, school, Docket No. Tex. 41-604. Est. **$69,730.**

Tex., Fort Worth—S. H. Bothwell, city mgr., customs bldg., about **$150,000.**

†Tex., Gainesville—Home Owners' Loan Corp., Cotton Exchange Bldg., Dallas, 40 unit family conversion program.

†Tex., Galveston—Home Owners' Loan Corp., 501 Trust Bldg., Galveston, converting bldgs. into apartments, etc.

Tex., San Antonio—City and Bexar Co., plans by Spillman & Spillman, 402 Hicks Bldg., San Antonio, brick, concrete nurses' home addn., Rob. B. Green Memorial Hospital. Applied for FWA funds.

Tex., Temple—A. E. Taylor, city mgr., bldgs., recreation center facilities. N. E. Torstle, engr.

†Utah, Gold Hill—Pub. Housing Auth., NHA, Dierks Bldg., 1006 Grand Ave., Kansas City, Mo., 12 family trailers or portable unit housing, Utah 42160.

†Utah, Grantsville—Pub. Housing Auth., NHA, Dierks Bldg., 1006 Grand Ave., Kansas City, Mo., 15 family trailers or portable units housing, Utah 42164.

†Utah, Helper—Pub. Housing Auth., NHA, Dierks Bldg., 1006 Grand Ave., Kansas City, Mo., 50 family trailers or portable unit housing, Utah 42163.

†Va., Norfolk—Pub. Housing Auth., NHA, Georgia Savings Bank Bldg., Peachtree and Broad Sts., Atlanta, Ga., surfacing roadways for housing, Va. 44184, to D. B. Stabler, 3025 Derry St., Harrisburg, Pa. **$33,020.**

†Va., Norfolk—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., WAVES quarters, NOH, NOY 6265, to L. V. Abbott, Camp Lee. **$282,492.**

†Va., Norfolk—Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N.W., Wash., D. C., WAVES quarters and recreation bldg., U. S. Naval Hospital, NOY 6804, to Virginia Engineering Co., Melson Bldg., Newport News. **$194,900.**

†Washington—U. S. Eng., 800 3 Ave., Seattle, Zone 4, bldg., Neg. No. 698, Grant Co.

†Washington—U. S. Eng., 800 3 Ave., Seattle, Zone 4, miscellaneous bldgs., Neg. Nos. 684 and 692, King Co.

†Washington—U. S. Eng., 800 3 Ave., Seattle Zone 4, bldgs., Neg. Nos. 686 and 696, Snohohish Co.

†Wash., Forks—Pub. Housing Auth., NHA, Skinner Bldg., 5 Ave. and Union St., Seattle 1, 20 family unit housing, Wash. 45234.

†Wash., Long View—Pub. Housing Auth., NHA, Skinner Bldg., Fifth Ave. and Union St., Seattle, 100 family dwelling units, Wash. 45235.

†Wisconsin—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago, Ill., 60 unit temporary dwellings, Wis. 47071.

†Wis., Superior—Pub. Housing Auth., NHA, 201 N. Wells St., Chicago, Ill., 60 family dwelling units, Wis. 47071.

B. C., Vancouver—Dominion Govt., Ottawa, Ont., remodeling homes into apartments. $150,000. National Housing Admin., Jocelyn Davidson, local mgr., City Hall, archts.

Man., St. James (Postal Dist. Winnipeg)—Dom. Government, Ottawa, Ont., barracks block etc. at Fort Osborne Army Camp, **$150,000.** Dpt. Natl. Defense, Cartier Sq., Ottawa, Ont., archts.

N. B., St. John—Dpt. P. Wks., Ottawa, Ont., pavilion at Lancaster Military hospital, to Maritime Const. Co., Ltd., Main St., Fairville, **$214,000.** C. D. Sutherland, 94 Carling Ave., Ottawa, Ont., archt.

Ont., Kingston—Secy. Dpt. Health, Toronto, bids soon tubercular sanatorium, for city of Kingston, **$200,000-$250,000.**

Ont., London—City of London, c/o City clk., 60 houses. **$207,000.**

Ont., London—Dominion Govt., Ottawa, 2 story, 20x195 ft. and 27x38 ft., infectious unit to hospital, concrete fdns., etc., to Frontenac Constr. Co., Ltd., 704 C.P.R. Bldg., Toronto, **$150,000.** C. D. Sutherland, Dpt. Pub. Wks., Ottawa, archt., K. M. Cameron, Dpt. Pub. Wks., Ottawa, engr.

★**Ont., Malton**—Wartime Housing, Ltd., 55 York St., Toronto, two 500 bed hotels, to Russell Const. Co., Ltd., 501 Harbour Comm. Bldg., Toronto. Est. **$700,000-$800,000.** Bids 7/23. CD 7/19.

Ont., Ottawa—Dom. Government, Ottawa, plans by Dpt. P. Wks., Ottawa, library of Parliament addn. **$300,000.**

Que., Chicautimi—Hotel Dieu St. Vallier, Chicautimi, hospital addn. **$228,875.**

Que., Montreal—Hospital St. Luc, 1058 St. Denison St., Montreal, plans by Perrault & Gadbois, 3795 Van Horne Ave., Montreal, 4 story nurses' home and tunnel, CD 6/22.

Que., St. Hilaire—Quebec Sugar Refinery Corp., St. Hilaire, constr. 12 dwelling units, for staff of beet sugar refinery, B. R. Perry, 680 Sherbrooke St., W. Montreal, engr., $200,000.

Que., St. Malo—Secy. Dpt. Munitions & Supply, Ottawa, Ont., bids soon 60x300 ft. ordnance depot, incl. 4 garages, workshop, for Dpt. Natl. Defense (Army), Ottawa, Ont. About **$250,000-$300,000.**

Sask., Moose Jaw—Dom. Government, Ottawa, Ont., plans by Dpt. Natl. Defense (Air), Lisgar St., Ottawa, Ont., repair shop and workshop near 5 Ave.

Sask., Regina—Dom. Government, Ottawa, Ont., hospital addn., **$150,000.** Dpt. of Pensions & National Health, MacKensie Ave., Ottawa, Ont., archts.

COMMERCIAL BUILDINGS

PROPOSED WORK

Calif., Oakland—Preferred Building Co., 666 Mission St., San Francisco, plans by P. H. Hammarberg, 2 Norwood Ave., Berkeley, forty 2 story, frame, multiple dwelling units. Over $150,000.

Calif., Richmond—Economy Builders, 1510 Penhandle St., 24 two story frame and plaster bldgs., San Pablo Ave., over $150,000.

Calif., Seal Beach—Philip Norton, Inc., c/o C. N. Aldrich, 1834 Dawson Ave., Long Beach, archt., fifty-three, 5 and 6 room, frame, stucco dwellings, over $150,000.

Calif., Wilmington—Palmes-Built Homes, 1960 E. Slauson Ave., Huntington Park, plans by C. N. Aldrich, 1834 Dawson Ave., Long Beach, fifty-six, 6 rm., frame stucco, dwellings, near Anaheime and Figueroa Sts., over $150,000.

La., New Orleans—Oman Smith Constr. Co., Decatur, Ga., 400 defense homes, Franklin Ave., The Gentilly Sect.

Md., Baltimore—Melvin Park, Inc., 521 Munsey Bldg., seven 29x153 ft. apartment bldgs., one 12 apartment bldg.

Mich., Allen Park (Sta. Dearborn)—Frazer Homes Co., 1140 Book Tower, Detroit, plans by C. N. Agree. 1140 Book Tower, Detroit, 84 frame dwelling units, approx. $250,000.

Mich., Lincoln Park (Br. Detroit)—Vinton Housing Co., c/o C. N. Agree, archt., 1140 Book Tower, Detroit, 61 frame dwelling units, approx. $185,000.

Mont., Great Falls—[illegible] J. Duval, [illegible] Ave., North, plans by [illegible] ing 3 story, brick bldg. [illegible] $150,000.

N. D., Minot—Trinity Hospital, [illegible] I. L. Rush, Minot, remodeling nurses home, $156,999.

O., Willoughby—Metropolitan Hand & Executive ment Co., J. Demshar[illegible], 874 E. 40 Cleveland. 100 or more single homes, site imprvs. $300,000. Main St., Painesville.

Ore., Portland—Home Crest Development Co., Yeon Bldg., plans by Stanton & Jonston, Railway Exchange Bldg., Portland, 4[illegible] ing units, S. E. 7 Ave. and Francis. $200,000. FHA.

★**Ore., Portland**—Winslow Campion Co., S. W. Jefferson St., Portland, plans by Stanton & Jonston, Railway Exchange Bldg., Portland, 240 dwelling units in apts. & bldgs., 20 two story and 10 one-story, S. 47 St. and Burnside. $1,250,000.

S. D., Sioux Falls—Sioux Valley Hospital, plans by Hugill & Featherwick, Sioux Falls, hospital addn. $180,676.

Tex., Abilene—Country Club Homes, Inc., plans by Hushes and Olds, Compton Bldg., 40 frame type dwellings, facilities, utilities, etc., $150,000.

Tex., Dallas—Airway Constr. Co., Construction Bldg., twenty-one, 1 story, brick veneer duplex dwellings, etc., $150,000.

Tex., Dallas—Carver Courts, Inc., Main, plans by H. S. Avery, 2[illegible] dale, fifty 1 story, frame duplex dwellings, concrete fdn., all utilities, etc., $272,000.

Tex., Dallas — Gardens Development Co., Neely St. twenty-six 6 room, brick veneer dwellings, Oak Cliff. $150,000.

Tex., Dallas—Garland Homes, 3[illegible] mandy, plans by H. S. Avery, 2[illegible] dale, 22 or more, 1 story, frame asbestos type dwellings, all facilities, utilities, etc., $150,000.

★**Tex., Dallas**—Southwestern Medical Foundation, c/o Dr. E. H. Carey, 5301 [illegible] St., plans by Geo. L. Dahl, Thomas Bldg., medical center, fireproof bldgs. $1,500,000. CD 2/19—ENR 3/4 under Post-War.

Tex., Goose Creek—Texas Development Co., soon lets contract 150 frame dwellings, concrete fdns., etc. Plans deposit $[illegible] $550,000; paving streets, over $25,000. Hedrick & Lindsley, 818 So. Standard Bldg., Houston. (Former contract rescinded 7/29—ENR 8/5, under CA.

★**Wash., Aberdeen**—St. Joseph's Hospital, Aberdeen, nurses' home and residence, Catholic sisters. $600,000.

Mont., Great Falls—F. J. Duval, 2500 [illegible] Ave. N., plans by Corwin & Co., conversion furniture warehouse into 3 story, 50x150 ft. brick apartments and store, $150,000.

Ont., Toronto—New Temiskaming Hotels Ltd., c/o W. H. Bouck, 20 E. Adelaide St., Toronto, hotel. $150,000.

Que., Arvida—Aluminum Co. of Canada Ltd., Sun Life Bldg., Montreal, 100 additional cottages, $300,000.

Que., Montfort—Bd. of Directors, c/o Mgr. Vachon, Archbishop, Ottawa, St. Patrick's, Ottawa, orphanage, $200,000.

Que., Quebec City—Owner, c/o Alderman Henri Gagnow, City Hall, plans by G. Amyot, 105 Ct. de la Montagne, 100 Ct. de la Montagne, 100 residences. $275,000.

Que., Three Rivers—Bd. of Governors Cooke Sanatorium, Three Rivers, hospital extension. $150,000.

Que., Three Rivers—R. C. Episcopal Corp. c/o Rt. Rev. A. O. Comtois, church and presbytery. $150,000.

BIDS ASKED

Bids Asked August 25

Ont., Chatham—Miss L. Baird, Secty., General Hospital, 3 story, basmnt., hospital addn., rein.-con. fdn., floors, brick walls, $[illegible] CD 7/27—ENR 8/5.

Bids Asked

Tex., Houston — McGinty & Knostman, archts., 2017 W. Gray Ave., seventy-five 1 story frame duplexes, for Miles Strickland, 2nd Nat. Bank Bldg., $225,000.

CONTRACTS AWARDED

California—H. C. Cox, 205½ 11 St., Seal Beach, 61 frame, stucco dwellings. Nat. Distr. Owner builds, **$300,000.**

Calif., Lakewood Village—C. B. Robertson, 11,065 Sunset Blvd., West Los Angeles, nineteen, 4 family, frame, stucco apartment bldgs. Owner builds, **$170,000.**

Calif., Long Beach—Artcraft Builders, 8[illegible] So. Western Ave., 39 frame, stucco dwellings. Owner builds, **$222,500.**

Calif., Modesto—P. W. Germain & D. Cavanaugh, 2006 Cornell Ave., Fresno, three 1 story, frame residences. Owner builds. Est. over **$150,000.**

MERCIAL BLDGS. (Contracts Awarded, d.)

lif., San Leandro—Valley & Lincoln, E 14 St., Oakland, eighty-one 1 story residences, Gardner Blvd., Gilmore Dr., on and Wayne Aves. Owner builds. over **$150,000.**

nnecticut—Owner, c/o D. Mansell, archt., ark Row, Stamford, eighty 2½ story, apartments, Sixth St. Owner builds, 000.

a., New Orleans—Edgewater, Inc., New rleans, 191 frame asbestos siding, defense s, to Kelly-Generes & Rittimer, Assoc. s., 407 Maritime Bldg., **$764,000.**

J., Bloomfield—Wittkop Holding Co., c/o urray & Schmidlin, archts., 968 Stuyvesant Ave., Union, 2½ story, U shaped, brick n apartment bldg., separate contracts. 00. CD 6/30—ENR 7/8.

J., Clark—Robbins Contractors Inc., 26 an Rd., one hundresd fifty 1½ story frame ences, Sunset Dr., separate contracts. 00; electrical contract to J. Denmark 8-18 Jamaica Ave., Woodhaven, N. Y.

J., East Orange—Nelac, Inc., 97-50 s Blvd., Forest Hills, N. Y., 2 story, frame garden apartment, Beechwood s, Prospect St., to Victory Gardens, 97-50 Queens Blvd., Forest Hills, N. Y., 00. B. Sumner Gruzen, 921 Bergen Jersey City, archt.

J., Manville—Langley Corp., 11 W. Pros- Ave., Mt. Vernon, N. Y., thirty-six 2 brick, cinder block residences, separate racts. **$270,000.**

, East Cleveland—Forest Hill Terrace Co., Sidney & Harold Galvin, 1338 Guardian , Cleveland, two 3 story, bsmnt., brick ment bldgs., to D. & M. Constr. Co., 3171 ington Blvd., Cleveland. Est. **$350,000.** eld, Harris, Robinson & Schafer, National , Cleveland, archts.

x., Houston—Lawndale Terrace Corp., Sunset Blvd., underground utilities, incl. works, sewerage, gas lines for apartment s, to P. F. Eller Co., 227 N. Lennox St., ton. **$27,500.** CD 8/5—ENR 8/12.

x., San Antonio—Bexar Lumber Co., 2716 litos St., 25 frame type dwellings, utilities, ities, etc., force account, **$150,000.** CD 6/16 NR 6/24.

INDUSTRIAL BUILDINGS

POSED WORK

orida—PLANT—E. L. Gordon, 141 St. Beaches, St. Petersburg, bids soon fish ing plant, Snug Harbor, near St. Peters- $50,000.

, Waterloo—PLANT—Soybean Processing C. E. Butler, pres., soybean processing expansion, $80,000.

J., Bayonne — PLANT — International el Co., 15 Oak St., Bayonne, soon lets ract 1 story brick, asbestos siding, mainte- bldg. and research laboratory, $50,000. e & Kahrs, 15 Washington St., Newark, ts.

J., Harrison — PLANT — Hyatt Roller ing Co., Div. General Motors, 427 Middle- Ave., soon lets contract 2 locker and er room bldg. addns., Mfg. Plants 8 12, $45,000; power house No. 21. H. h, 427 Middlesex Ave., Harrison, engr.

J., North Bergen—PLANT—Palro Inc., Johnson Ave., Jersey City, 1 story, part t. brick, concrete block mfg. plant.

J., Rahway—PLANT—Merck Co., 126 E. oln Ave., soon lets contract mfg. plant 17, $40,000. The Ballinger Co., 105 E. t., Phila., Pa., archts. CD 7/27—ENR

, Elyria—FACTORY—Electro Alloys Co., C. Whyte, vice pres., Taylor St., 1 story, 50 ft., brick, steel factory, $40,000.

x., Houston — PLANT — Harris County ers Victory Co-Operative Society, 1918 existing vegetable processing and can- plant expansion.

s., McAllen—PROCESSING PLANT—Mar- Canning Co., 77x203 ft., brick, rein.-con., table, fresh meats processing plant.

s., McAllen—PLANT—L. H. Moore Can- Co., brick, rein.-con., vegetables, etc., ssing plant, $40,000.

s., Astico—WAREHOUSE—Stokely Bros. 941 N. Meridian Ave., Indianapolis, Ind., ry 50x140 ft., brick, concrete block, steel ge warehouse. A. Kuenzl, 202 N. Water Watertown, engr.

s., Portage — PLANT — Portage Co-op. mery Assn., Portage, plans by Klinger, ard & Gohn, 218 S. Barstow St., Eau e, 1 and 2 story, brick, tile, milk de- ating plant, concrete fdn.

s., Watertown—PLANT—Lake View Co- ative Dairy, 101 Western Ave., plans by Kuenzl, 202 N. Water St., milk plant. $40,000. CD 6/9—ENR 6/17.

s., Wisconsin Rapids—MACHINE SHOP— olidated Water Power & Paper Co., Wisconsin Rapids, 2 bldgs., machine shop and one for plastic division.

Alta., Edmonton—ENGINE HOUSE—Northern Alta., Rly. Co., 311 C. P. R. Bldg., Edmonton, R. C. Vaughan, pres., a five stall engine house, machine shop, boiler house. $129,000.

B. C., Vancouver—PLANT—Princeton Trail Sawmills, Ltd., 1011 Rogers Bldg., Vancouver, saw mill and allied plant.

B. C., Vancouver—PLANT—Vancouver Instruments, Ltd., 624 Birks Bldg., Vancouver, plant for instruments, tools, etc. $40,000.

B. C., Vancouver—PLANTS—The Swanson Lumber Co., Ltd., 111 Commercial Bldg., Edmonton, Alta., lumber mill and associated plants. $50,000.

B. C., Vancouver—FACTORY—Artcraft Furniture & Fixtures Ltd., 530 Rogers Bldg., Vancouver, wood working factory.

B. C., Victoria—MILL—Overseas Wood Products Ltd., Poett Nook, Barkley Sound, Vancouver Island, mill, capacity 200,000 ft. logs daily.

Man., Winnipeg—PLANT—Manitoba Vinegar Co., Ltd., 234 Pritchard Ave., plant construction, $40,000.

Man., Winnipeg—HEATING SYSTEM—Municipality, municipal heating sys., Public Utilities Com., Winnipeg, engr., $75,000.

Nova Scotia—PLANT—Government, Nova Scotia, Halifax, cold storage and processing plants, Shelburne Co., Dpt. P. Wks., Halifax, engr., approx. $75,000.

N. S., Malagash—PLANT—Dpt. Munitions & Supply, Ottawa, Ont., plant for production of pure fishery salt, $40,000.

N. S., Shelburne—PLANT—N. S. Government, Halifax, creamery and processing plant, Dpt. P. Wks., Halifax, engr., $60,000.

Ont., Cobourg—PLANT—Syndicate, c/o J. D. Burnet, mayor, mfg. plant, $100,000.

Ont., Oshawa—PLANT—Fiberglas Canada Ltd., 7 First Ave., Oshawa, plant remodelling, $40,000.

Ont., Port Colbourne — PLANT — Canadian Furnace, Ltd., 5 Lake Rd., plant construction.

Ont., Preston—PLANT—Transportation Appliances, Ltd., 7 Williams St., plant construction, $50,000.

Ont., Riverside—PLANT—Rocky Mountain Oils and Mines Ltd., c/o S. B. Robinson, Riverside, quarrying and mining plant, $50,000.

Ont., Toronto—PLANT—Brantford Roofing Co., Ltd., 259 W. King St., Toronto, plans plant ext., $150,000.

Ont., Toronto—PLANT—Cheney Chemicals Ltd., 180 Duke St., Toronto, plans plant ext. $100,000.

Ont., Toronto—PLANT—Fluorescent Industries Ltd., c/o N. McFarlane, 372 Bay St., Toronto, mfg. plant.

Ont., Toronto—PLANT—Plastics Equipment Ltd., c/o E. W. Mockridge, c/o Montgomery & Howard, 360 St. James St., Montreal, Que., plant. $50,000.

Ont., Toronto—PLANT—Dominion Machine & Tool Co., Ltd., c/o J. R. Hetherington, D. C., 10 E. Adelaide St., mfg. plant. $40,000.

Ont., Toronto—PLANT—Lightfoot Engineering Co., Ltd., c/o D. C. Manders, 61 Wineva Ave., Toronto, general engineering plant. $40,000.

Que., Arvida—PLANT—Aluminum Co. of Canada, Ltd., 1700 Sun Life Bldg., Montreal, laboratory bldg., $136,721.

Que., Chambord — PLANT — Cultivator's Assoc., Registered, c/o A. Riverin, Roberval, refrigeration plant, $40,000.

Que., Gramby—PLANT—Stark Bros. Ribbon Corp. of Canada Ltd., 21 St. Charles St., plant addn. concrete fdn., brick walls, $40,000.

Que., Melocheville—PLANT—St. Lawrence Alloys and Metals, Ltd., Melocheville, plant extension including trestle constr., $120,000.

Que., Montreal—PLANT—Canadian Oil Co., Ltd., 385 Bridge St., Montreal, plant addn., $40,000.

Que., Montreal—PLANT—A. Breault, 6621 25 Ave., Rosemont, plans by J. A. S. Haule, 3429 Cartier St., 1 story, 31x127 concrete brick garage, concrete fdn., Belanger St. near 28 Ave., Rosemont, $45,000.

Que., Montreal — WAREHOUSE — Living Room Furniture Mfg. Co., 2566 St. Catherine St. E. constr. of warehouse, 93x144 ft. brick walls, hot water heating, Marc Cing-Mars, 60 St. James St. W., Montreal, archts., $45,000.

Que., Sherbrooke — GARAGE — Sherbrooke City Transit Co., Ltd., 33 W. King St., Sherbrooke, auto bus garage, 200x125 ft., and repair shop. J. P. Audet, 52 Prospect St., Sherbrooke, archt. $50,000.

Que., Sutton—PLANT—Godue Mfg. Co., Ltd., 14 Maple St., casket mfg. plant and boiler house, $40,000.

Que., Temiskuming—PLANT—Canadian International Paper Co., Ltd., Sun Life Bldg., Montreal, plant imprvs.

Sask., Saskatoon — PLANT — Owner, c/o Sask. Industrial Development Bd., Regina, H. W. Monahan, mgr., plant for extraction oil from flax.

BIDS ASKED

Tex., McAllen—PROCESSING PLANT—Marshall Canning Co., 77x203 ft., brick, rein.-con. processing plant. CD 8/11—ENR 8/19.

Tex., McAllen—PROCESSING PLANT—L. H. Moore Canning Co., brick, rein.-con. processing plant. CD 8/11—ENR 8/19.

CONTRACTS AWARDED

Calif., Oakland—PLANT—Alberts Milling Co., 2700 7 St., repair, alterations to recently burned milling plant to The Austin Co., 1001 Ray Bldg., Oakland, est. **$90,000.**

Calif., Visalia—PLANT—S. W. Smith, 250 North N St., Tulare, cold storage plant, W. Mineral Kins and Tipton Aves., to F. K. Hawthorne, Dayton Ave., Tulare, and R. C. Fish, T. Valley Refrigeration Sales & Service, Lindsay Highway, Tulare. Est. **$50,000.**

Mo., St. Louis—PLANT—Scullin Steel Co., 6700 Manchester Ave., St. Louis, Zone 10, 3 story 50x150 ft. brick, rein.-con. office bldg. for steel plant, Waldemar, Kraft and Manchester Aves., separate contracts; electrical contract to S. C. Sachs Co., 2022 N. 9 St. CD 6/21—ENR 6/24.

N. J., Bayonne—PLANTS—East Coast Shipyards, 21st St., Bayonne, pipe fitters and woodworking shops, to Burke Constr. Co., 10 Highfield Lane, Rutherford, **$50,000.**

N. J., Bloomfield — FACTORY — Westinghouse Electric & Mfg. Co., MacArthur Ave., 2 story, brick, concrete block factory addn., to Leonard Bros., 58 Willow St., **$40,000.** H. L. Heilman, Maloney Bldg., Pittsburgh, Pa., archts.

N. J., Hoboken—CAFETERIA—Thos. Linton, Inc., 1500 Hudson St., converting mfg. bldg., into cafeteria bldg., to Chas. Christenson & Sons, 921 Bergen Ave., Jersey City, **$40,000.**

N. J., Phillipsburgh—PLANT—J. T. Baker Chemical Co., 535 N. Broad St., 1 story 50x200 ft. frame mfg. bldg., to Phillipsburgh Bridge & Constr. Co., Sigsbee Ave., **$50,000.**

N. J., Princeton—INTERLOCKING BUILDING—Pennsylvania R. R., 26 Exchange Pl., Jersey City, 2 story bsmnt., brick interlocking bldg., to Matthews Constr. Co., 296 Alexander Ave., **$10,000.** CD 6/22—ENR 6/24.

O., Cleveland—FACTORY—Air Maze Corp., A. E. Schaaf, pres., 5200 Harvard Ave., 1 story, 90x180 ft., factory addn., to Hadlock Krill Co., 2169 E. 33 St., **$40,000.** Awarded 8/4.

★**O., Massillon** — FACTORY, etc. — Canton Drop Forging & Mfg. Co., C. A. Branchler, pres. and gen. mgr., 207 12 St., Canton, rebuilding plant into factory and office bldg., to Brown Constr. Co., 1900 Euclid Ave., Cleveland. Est. **$2,000,000.** McGeorge & Hargett, 9400 Quincy Ave., Cleveland, engrs. Awarded 8/5. CD 7/28—ENR 8/5.

Wis., Green Bay—WAREHOUSE—McDonald Lbr. Co., 308 Hway., 1 story, 90x245 ft., brick warehouse, day labor. G. J. Feldhausen, archt., and G. C. Coughlin, engr., both Columbus.

Wis., Sheboygan—SHOP—Hayssen Mfg. Co., N. 13 St. and St. Clair Ave., 1 story, 40x116 ft., steel, brick shop addn., concrete fdn., to A. Hummitzsch, 1435 Superior Ave., electrical work, by owner. CD 6/22—ENR 6/24.

Wis., Two Rivers — SHOP — Kahlenberg Bros. Co., Two Rivers, 1 story 70x100 ft. brick machine shop addn., concrete fdn., to W. W. Oeflein Co., Inc., 5345 N. Hopkins St., Milwaukee.

Ont., Chippawa—PLANT—Norton Co., Ltd., plant addn., to Smith Bros. Co., Ltd., 1740 Ellen Ave.; steel, to Standard Steel Co., Ltd., Port Robinson; excavation, to J. J. Bell, 134 Portage Rd., Niagara Falls, **$350,000.**

Ont., Chippawa—PLANT—Norton Co., Ltd., Chippawa, plant addn., to Standard Steel Constr. Co., Ltd., Port Robinson, est. **$394,000.**

Ont., Grimsby—PLANT—E. H. H. Co., Ltd., 20 Hamilton St., 50x150 ft., electrical equip., and small tools, etc., mfg. plant. Owner builds with J. Stadelmier, 120 Maple St., **$40,000.**

Ont., Leamington—PLANT—H. J. Heinz Co., Ltd., Erie St., Leamington, plant extension, to Dinsmore-McIntire, Ltd., 903 Security Bldg., Windsor. **$60,650.** Hutton & Santer, Pijatt Bldg., Hamilton, archt.

Ont., London—PLANT—C. L. Hyman Co. Ltd., Richmond St., repairing plant bldgs., to Putherbough Constr. Co., Ltd., 320 Colborne St., London, approx. **$50,000.**

Que., Montreal—GARAGE—Montreal Tramways Co., 159 W. Craig St., 1 story, 162x322 ft., structural steel, brick bus garage, Ste. Cupegonde St., to Walter G. Hunt Co. Ltd., 1405 Bishop St., **$200,000.** Bids 7/27. CD 7/15—ENR 7/22

Que., Montreal—PLANT—Canadian Pacific Ry. Co., J. E. Armstrong, ch. engr., Windsor Sta., round house extens., Glen Yards to M. H. N. Gruner & Co., Ltd., 394 Victoria Ave., Montreal, approx. **$60,000.**

Que., Shawinigan Falls—LABORATORY—Aluminum Co. of Canada, Ltd., 1700 Sun Life Bldg., Montreal, alterations of laboratory and install. of equipmt., to Fraser Brace, Ltd., 360 St. James St. W., Montreal, **$154,000.**

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PLANNING ENGINEER to assist in development of Master Plan for the City of Milwaukee; must be not over 45 years of age, licensed as a professional engineer in Wisconsin or eligible to obtain such license. Salary $3967 to $4567 per year with liberal pension privileges. Also two positions as Senior Planner at $3367 to $3667 per year. Examinations September 15. Apply to City Service Commission, City Hall, Milwaukee, Wisconsin.

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BRIDGE DESIGNER and Draftsman experienced in steel and concrete railway bridge work. Location—Norfolk, Va. Salary $280 to $300 per month. Give experience, references and when can report. P-771. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

COST ENGINEER, wanted for Hospital Construction Project at Bridgeport, Conn. Must be qualified to maintain complete operating cost data. P-779. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

FIRE PROTECTION ENGINEER and Inspector. Permanent positions open in East, South, or Middle West, with large industrial fire insurance organization. Previous knowledge in this work not necessary. Applicant must be a technical graduate with manufacturing or engineering experience, and possess a good personality. Send photo with letter. Men subject to draft for military service cannot be considered. P-780. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

DESIGNERS AND DRAFTSMEN—Structural, Electrical and Mechanical. Also Electrical and Mechanical Inspectors. Defense job East Tennessee. P-791. Engineering News-Record, 520 N. Michigan Ave., Chicago, 11, Ill.

POSITIONS WANTED

ARCHITECTURAL AND STRUCTURAL ENGINEER. Reinforced Concrete, Steel and Timber Structures. Good draftsman. P. O. Box 303 Jellico, Tenn.

PLUMBING SUPERINTENDENT 20 years experience inclusive drainage, fuel, water systems. Layout estimator control purchasing. Just completed large S. A. Naval base. Travel, draft deferred. PW-753. Engineering News-Record, 330 W. 42nd St., New Work 18, N. Y.

BUILDING CONSTRUCTION EXECUTIVE. 25 years experience. Thoroughly understands estimating, subletting, purchasing and office coordination. Age 53, married; Just completed an eleven months assignment; References from last 2 employers. PW-754. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

PROJECT OR CONSTRUCTION MANAGER or general superintendent. Experience 30 years covering all kinds of structures and types of contracts in both the private and government fields, last three on low cost and defense housing. Location immaterial. PW-764. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

CONTRACTOR'S SUPERINTENDENT-MANAGER, extensive experience in commercial, industrial, and housing construction, available short notice. Well recommended. Anywhere, S or SW preferred. PW-765. Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

PROJECT MANAGER—Construction Engineer. Age 44. 20 years experience in construction field; Heavy Industrials, Foundations, Surveys, Public Works, Housing Projects. Completing work as Project Manager Five Million Dollar War Housing Project September 15. Available thereafter. Will accept work any location. PW-757, Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

POSITIONS WANTED

MASTER MECHANIC — Equipment Superintendent. All types heavy equipment maintained and rebuilt. Ability to organize efficient first class maintenance organization. Location immaterial. Following of first class heavy duty mechanics with tools also expert welders. Specializes in Caterpillar, Allis Chalmers, International tractors and Carryall units, all types diesel motors. Best references. PW-769. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ENGINEER—Graduate M. I. T., 18 years on Designing, Structural and Civil, Office Engineer. Executive Assistant for leading Consulting and Contracting firms. PW-770. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ESTIMATOR—Accurate Quantity Take-off and cost man; compile complete bid on all types construction, 20 years experience in field and office as estimator and superintendent. PW-772. Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

CONSTRUCTION SUPERINTENDENT — 27 years experience, dirt moving, Sewers, Tunnels, Concrete, Airports, Railroads, Highways and Housing, also Graduate Engineer. Age 46. Available immediately. PW-781. Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

CIVIL ENGINEER—Ten years experience in the Field of Hydraulic Dredging. Thoroughly experienced in Estimates, Operations and Hydrographic Surveys. Capable of Superintending projects of this nature or in other earth-moving fields. Written release from present employer may be supplied. Draft status 3A—3 dependents—37 yeares of age. PW-782. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

REINFORCED STEEL GENERAL FOREMAN familiar with field and office practice open for engagement. Recently completed a 14,00 Ton placement. PW-783. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ESTIMATOR—General Superintendent. 50, Swedish, graduate. E.E. 25 years experience, general building construction very capable, A1 references. PW-784. Engineering News-Record, 520 N. Michigan Ave., Chicago 11, Ill.

ASSISTANT SUPERINTENDENT—Construction Engineer, 3 years. Municipal—4 years. Reinforced Concrete Buildings—9 years. Highway—9 years. Locks and Dams. Supervision—Engineering and Inspection. PW-785. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ACCOUNTANT—Construction field thorough knowledge general accounting, costs, purchasing, payrolls time, social security and unemployment, liability insurance audits. Age 47, available immediately. J. J. Meekan 3315 Hull Ave., New York City.

GENERAL RIGGER and Erection Foreman available after August 15th. With or without following of skilled union men equal to fifty percent of requirements. United States, Latin Americas, Alaska. Twenty-five years on heavy construction rigging, structural erections, foundation piling and steel sheetpiling installations. Oliver C. Howe, 1441 Nichols Place, Ashland, Kentucky; Tel: Park 2841.

SUPERINTENDENT WATER LINES and Filtration Plants Pumping Stations. Thirty years experience all type piping competent take off, requisition material lay out. PW-755. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

SALES MANAGER or Purchasing Agent for structural steel fabricating plant; 25 years experience; age 50 excellent health; go anywhere; furnish A-1 references. PW-789. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

CIVIL ENGINEER graduate; 34 years experience; design and construction; water supply; industrial plants; power plants; hydro-electric developments. PW-787. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

POSITIONS WANTED

STRUCTURAL - MECHANICAL ENGINEER twenty years experience design and construction. Synthetic rubber, chemical plant and hydro projects. Design, specifications and contracts. Available September first. R. I. 1, age 40, New York State license. Location immaterial. Draft classification 3A (E) PW-788. Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

FIELD ENGINEER—28, just finishing job as Chief Field Engineer on large housing project. Extensive experience, including work on runways, roads, buildings, sewer, water lines, etc. Also worked with U. S. Engineers in Tropics for thirteen months. Capable of organizing and directing surveys. Will travel anywhere in U. S. or abroad. Draft deferred. PW-792. Engineering News-Record, 330 W. 42nd Street., New York 18, N. Y.

PURCHASING AGENT experienced in construction purchasing, priorities, and governmental procedures. Past four years with City of Tulsa, E. I. Dupont de Nemours & Co., Manhattan-Walco Construction Co., Stearns-Roger Mfg. Co. Capable of organizing and running efficient Purchasing Department. Age 29—Draft Classification 3-A—Available September 15th. Will consider position outside United States. Contact: R. P. Holbrook, Stearns-Roger Mfg. Co., Box 143, Great Bend, Kan.

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EQUIPPED SURVEY PARTIES for all types of surveyor construction work. Any location. Harwood, 258 Broadway, New York City.

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